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A Synthesis of Research on Competition in the Financing and Delivery of Health Services

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The *Research Report Series* is published by the National Center for Health Services Research (NCHSR) to provide significant research reports in their entirety. Research Reports are developed by the principal investigators who conducted the research, and are directed to selected users of health services research as part of a continuing NCHSR effort to expedite the dissemination of new knowledge resulting from its project support.Research supported by NCHSR is submitted to peer review by non-Federal experts for scientific and technical accuracy.

Abstract

This report provides a comprehensive synthesis of the existing research on the nature and extent of competition in the financing and delivery of health services. The emphasis in this report is on presenting evidence on barriers to competition, price competition, and nonprice competition in the health services market. The initial chapter focuses on developing a definition of competition which can provide a framework for the organization of the synthesis of the literature. Then, structure, conduct, and performance in the market for health services is reviewed, with an emphasis on those factors which act as barriers to competition and affect the performance of the market. Separate chapters are devoted to an examination of competition and its effects in the markets for hospital services, physicians, dentists, health insurance plans and alternative delivery systems. Evidence on competition in several other submarkets is concisely summarized in an additional chapter. The final chapter focuses on findings related to current policy issues.

Project Abstract

NCHSR undertook a review of the research literature in response to the need for information on issues related to the role of market forces in the health care system. The review resulted in four publications. Two of the publications describe and summarize the research literature: *An Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services*, DHHS Publication No. (PHS) 83–3326; and *A Synthesis of Research on Competition in the Financing and Delivery of Health Services*, DHHS Publication No. (PHS) 83–3327. An executive summary of these two reports is contained in *Research on Competition in the Financing and Delivery of Health Services: A Summary of Policy Issues*, DHHS Publication No. (PHS) 83–3328–1. The fourth publication is the proceedings of an NCHSR-sponsored conference on proposed research priorities held in Washington, D.C., on March 4, 1982, for Federal Government officials: *Research on Competition in the Financing and Delivery of Health Services: Future Research Needs*, DHHS Publication No. (PHS) 83–3328–2.

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A Synthesis of Research on Competition in the Financing and Delivery of Health Services

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October 1982

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Foreword

In 1981 the U.S. Congress directed the Secretary of Department of Health and Human Services, through the National Center for Health Services Research (NCHSR), to undertake and support studies concerning the role of market forces in the health care system. In response to this mandate NCHSR funded a contract to assemble the past research literature on competition, formulate a bibliography of that research and prepare a research synthesis. This document and the accompanying annotated bibliography are designed to assist in setting an agenda concerning the direction future research should take in this vital area.

NCHSR, and other Federal agencies, have conducted or have funded research on competition for many years. This and other research, covered in this synthesis and annotated bibliography, represents the first comprehensive overview of the impact of diverse market forces on the health care system.

The availability of these reports will extend the use of the research studies in this area and encourage additional health services research focused on the restraint of cost increases and improvements in the availability and quality of care.

Donald E. Goldstone, M.D.
Acting Director

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What is competition?

Introduction

A popular view has developed that the market for health services is a special case among economic markets. A properly functioning economic market will assure that sellers are responsive to the preferences that consumers express through their willingness to pay for goods and services. In addition, sellers will use resources efficiently in producing these goods and services, due to the competitive pressures of many other sellers—ensuring that the prices of goods and services will be as low as possible.

Evidence presented by economists and policy makers to support the argument that the market for health services does not function appropriately is, most frequently, the dramatic and continuing rise in price levels and aggregate expenditures for health services. In 1950, total expenditures for health services were $12.7 billion—approximately $82 per person. By 1980, the latest year for which data are available, health care expenditures in the United States were $247.2 billion, an average of $1067 per person (Gibson and Waldo, 1981). During the past three decades, medical care prices have consistently outpaced the growth of general consumer prices. Since 1950, the overall Consumer Price Index (CPI) more than tripled, increasing at an average annual rate of 4.2 percent. However, the medical care component of the CPI has quintupled, increasing at an average annual rate of 5.5 percent (Weichert, 1982).

Rapid increases in expenditures and dramatic changes in price levels have occurred in many markets, under a variety of conditions. Economists recognize that rising expenditures and/or price increases in some markets merely reflect market adjustments to increasing demand or temporary shortages of supply. These events may occur even in markets which are highly competitive. Increasing competition in those markets will not alleviate the underlying conditions which lead to rapid increases in expenditures and prices.

In the market for health services, these phenomena are cited as evidence of market failure in the health care sector, due to the perceived, and often stated, differences between the market for health services and the markets for other goods and services. It is asserted that these differences are due to three fundamental conditions which provide sufficient reason to assume that the market for health services *may not* function as a normal economic market:

1. There is considerable uncertainty concerning the risk of contracting an illness, the appropriateness and efficacy of available treatments, and the potential costs of medical care.
2. The nature and complexity of medical services cause the information available to consumers to be less than adequate for economic decisionmaking.

These two conditions are important in determining the character of the market for health services since they result in a transfer in decisionmaking power from the consumer to the producer. A third, and potentially more important, condition has been introduced into this market:

3. There has developed a national commitment to the concept that access to basic, essential health services should be guaranteed to everyone, without respect to income or ability to pay.

One consequence of these three conditions in the market is that extensive insurance and public program payment for health services has developed, reducing the effect of price as a mechanism for allocating goods and services among consumers.

As the perception has grown that the market for health services functions inadequately, many solutions have been proposed. The concept that the introduction of competitive forces into this market may be sufficient to restore appropriate incentives to providers and consumers of health services is being considered. These market-strengthening proposals are based upon two assumptions:

1. Currently, competition is inadequate or nonexistent as a consequence of the unique characteristics of this market.
2. Increasing the degree of competitiveness is the

"best" potential solution to the problems which exist in the market for health services.

Examination of these assumptions is the central purpose of this project. It is important to recognize that the choice to be made by policymakers is not between perfect competition and total monopoly in the market for health services. It is unrealistic to assume that any market will conform to all the assumptions of either the perfectly competitive or pure monopoly models. The task to be addressed is to discern whether there are sufficient competitive elements to warrant the use of incentives to improve and strengthen competition in this market, in order to improve equity and efficiency in its operations.

The nature and extent of competition in the market for health services and in its component submarkets is investigated in this *Synthesis of the Research on Competition in the Financing and Delivery of Health Services.* In the remainder of this chapter, the meaning of "competition"—to economists, and others—is considered, and an overview of proposed competitive solutions to the problems of this market is provided. In Chapter 2, the market for health services is examined to identify conditions which may effect the extent and the nature of competitive forces in this market. Barriers to competition are described and evidence on the impact on the market of these barriers is presented. In addition, evidence on several dimensions of the performance of the market for health services is reviewed.

For each component submarket, evidence on barriers to competition, price competition, and nonprice competition is examined in Chapters 3 through 7. Findings from the existing research are summarized in an attempt to elicit conclusions on the nature and the extent of competition in each market, and to identify gaps in the research which hinder the development of policies which address the problems of the market for health services. Chapters 2 through 7 contain a comprehensive summary of the evidence on competition in the market for health services. For those readers with primarily a policy orientation, major selected policy issues are considered in Chapter 8 and the evidence obtained from the examination of market conditions and competition is interpreted within the general framework of these policy issues.

What is competition?

Competition is frequently advocated, sometimes criticized,[1] and seldom clearly defined—even by economists. McNulty (1968) states:

> There is probably no concept in all of economics that is at once more fundamental and pervasive, yet less satisfactorily developed than the concept of competition. Although the hesitancy and inconsistency which has characterized the history of American competitive policy is doubtless partly due, . . ., to our system, surely it is due also to the failure of economists adequately to define competition (p. 639).

Scherer (1980) emphasizes that "competition" encompasses two broad conceptions: (1) the conduct of buyers and sellers within a market, and (2) the structure of the market. The most widely accepted definition of competition (among economists) may be that of Stigler (1966) who defines a competitive market as one "in which the individual buyer or seller does not influence the price by his purchases or sales" (p. 87). The conditions under which a perfectly competitive market will normally arise as described by Stigler are that: consumers and producers have *perfect knowledge*; there are a *large number* of buyers and sellers in the market; each seller's goods are *perfect substitutes* for all other seller's goods; and a change in the quantity of goods available doesn't create market power for either buyers or sellers. Stigler states, however, that these extreme assumptions are not *necessary* to the existence of competition and continues: "The reason for not stating the weakest assumptions (necessary conditions) for competition is that they are difficult to formulate, and in fact are not known precisely" (p. 89).

Other definitional approaches to competition exist from disciplines other than economics. Bork (1978) offers the businessman's definition of a "process of rivalry" and cites several legal definitions. According to antitrust cases on the subject, competition is the "existence of fragmented industries and markets" preserved "through the protection of viable, small, locally owned businesses" (*Maple Flooring Manufacturers Association v. U.S., 1962*) and "restraint of competition begins when improper use is made of information" (*Brown Shoe Co. v. U.S., 1962*). Thus, competition appears to be recognized by a number of disciplines as a functioning social arrangement, but without a clear consensus on its precise definition.

In recognition of the fact that the perfect market structure, which would lead to perfectly competitive actions of buyers and sellers, does not exist, economists have debated the conditions necessary for "workable competition."[2] Clark (1940, 1955, and 1961) argues that some departures from the perfectly competitive norm are not devastating for achieving the long-run benefits of competition. Several economists have developed sets of criteria which may be used to evaluate the "workability" of competition in specific markets. Sosnick (1958) provides a synthesis of these criteria organized by whether they focus on the structure of the market, the conduct of participants in the market, or the performance of the market. However, there is no resolution in the economics literature of the question: *How many and what specific criteria are essential to ensure that a market is operating under conditions of "workable" competition?* In his later work, Clark (1961) shifted his emphasis from "workable" competition to "effective" competition, which he describes in this passage:

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[1] Alchian and Allen (1969) suggest to students, "You may have heard: The free enterprise, private property system, because it is competitive, promotes antisocial, jungle behavior. It induces cheating, conformity, discrimination and the dominance of the lowest quality, while discouraging humane behavior toward one's fellow men" (pp. 5–6).

[2] A phrase coined by Clark (1940) in his seminal article on this issue.

> For . . . competition to be effective, the crucial thing seems to be that prices be independently made under conditions that give some competitors an incentive to aggressive action that others will have to meet, whenever prices are materially above the minimum necessary supply prices at which the industry would supply the amounts demanded of the various grades and types of products it produces" (p. 18).

There are, clearly, many differing approaches to describing and defining competition. Businessmen, lawyers, economists, and others[3] offer varying perspectives. Economists debate the essential meaning of and conditions for competition among themselves—perhaps more ardently than do noneconomists, since the concept is so intimately related to the essence of economics. While books could be (and have been) devoted to elaborating upon the definition of competition, for the purpose of discussing competition in the market for health services, it is defined in its broadest terms as follows:

- Competition is a dynamic process of interaction between independent buyers and independent sellers which results in a tendency for prices of goods and services to move toward the minimum level at which sellers are willing to produce and offer goods and services.

This definition leads to several points which relate to the conditions necessary for competition to arise and to the results obtained:

- A competitive market is one in which the structure of the market and the conduct of buyers and sellers causes prices to tend toward the lowest level at which sellers are willing to produce and offer goods and services.
- Competitive markets and the resulting competition are considered desirable because:
  —Scarce resources are used more efficiently as firms seek to produce each unit of goods at the lowest possible cost.

  —Producers are induced to produce the set of products that are most valued by consumers.

  —Consumers are able to acquire more goods and services for any given income level.

  —Sellers receive a sufficient, but not excessive, return on investment.

  —Incentives are present for firms to seek and adopt cost-saving technological innovations.

In addition to the economic benefits resulting from competition, several political advantages may be associated with competition:

- Competition may result in a decentralization and dispersion of power.
- Money and goods are distributed impersonally, through market forces, rather than arbitrarily by government decisionmakers.
- There is relatively greater freedom of opportunity for individuals within a more competitive market.

Since it is agreed by most people in the United States that competition is desirable and provides benefits of an economic and political nature, it would seem apparent that, if a market appears to be functioning under relatively noncompetitive conditions, some people would benefit from changes which increase the degree of competition in that market. This conclusion is not a foregone one, however—economists agree that the effects of increased competition depend upon the underlying factors which have created the noncompetitive conditions in the market. In other words, every market is unique; i.e., while an increase in competitive forces may create beneficial effects in the market for automobiles, increased competition may be detrimental to consumers of telephone services. The difference in outcomes between these two markets would be the result of differences in the structural characteristics of these markets and the consequent conduct of buyers and sellers.

The "theory of second best" in economics (Lipsey and Lancaster, 1956) suggests that, when one or more fundamental requirements for a competitive market is violated, it is not necessarily true that attempting to obtain the maximum possible degree of competitiveness is the best policy. The desirability of policies which will add competitive forces to a market will depend on the particular situation and on the nature of the barriers to competition in that market. It is an important point that competition, under ideal conditions, leads to the most desirable outcomes for consumers. However, a closer approximation to competitive conditions is not always better than a less close approximation. It is an equally important point that a partially competitive market, under some circumstances, may yield less beneficial results than a

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[3] Alchian and Allen (1969) note that (p. 5), "There is only one way to avoid competition: according to the renowned practical philosopher, Arnold Palmer, 'If you aren't competing, you're dead.' And conversely."

fully regulated market. The decision rests upon the nature and the degree of competition present and the nature of the regulatory tools available. Since regulation is not perfect, in any case, the choice is actually between an imperfect market and imperfect regulation.

Competition and the market for health services

One dimension of the performance of the market for health services has been reviewed above: rapidly rising expenditure and price levels. On the basis of this evidence, many economists, researchers, and policy makers have concluded that the market for health services functions inefficiently. The majority of these observers agree that a primary reason for this "market failure" is the growth of third-party payment for services in response to consumers' uncertainty about the occurrence of and the costs of illness.[4] In addition, the existence of substantial consumer ignorance about appropriate and efficacious medical care may have led to the delegation of considerable power to physicians and other providers.

Scholars and policy makers have identified two alternative approaches for addressing the shortcomings in the medical care market place. One is to restore consumer and provider price consciousness through modifications of the present medical care financing system. The other is to replace key allocative functions of the marketplace with various types of direct regulation.

A variety of market strengthening proposals have been developed (e.g., Arrow, 1963; Enthoven, 1978; Marshall, 1976; Newhouse and Taylor, 1971). These market strengthening solutions all hinge on the consumer's ability to choose among alternative insurance benefit packages, such that the program incentives and costs reflect the consumer's own risk aversion and tastes for medical services. Among these proposals, the most frequently advocated are:

- Tax reform to treat health care insurance as any good or services;
- Cost-sharing through coinsurance, deductibles, and limited benefit coverage;
- Competition among alternative delivery systems and provider groups; and
- Application of antitrust laws to reduce provider control of the market.

An alternative often contrasted to the competitive model is more and/or different types of regulation of the health care market. Regulation of this market has increased rapidly since the introduction of the Medicare and Medicaid programs. However, while some regulations may be effective mechanisms for correcting the perceived misallocation of resources to and within the health care system, most researchers have concluded that the evidence, to date, fails to support this position. Indeed, some economists and researchers argue that inappropriate regulation may be an intrinsic part of the current problem (Pauly, 1980; Frech, 1980; Bovjberg, 1981; and others).

Competition approaches to the market for health services are not, in any case, regulation-free. In fact, some commentors on the competition model have noted that the degree of market regulation necessary to implement this policy may be as great, or greater, than the existing set of regulations (Bovjberg, 1981). The major benefits which may be gained through implementation of the competitive model is that consumers, rather than government or providers, would determine the quantity and mix of services bought and sold.

Proponents and opponents of these alternatives are articulate and persuasive. Prior to taking action to implement either solution to the problems of the health care market, policy makers will find it useful to have available evidence which supports or refutes various aspects of current or proposed legislative or regulatory initiatives, to the extent that such evidence exists.

A synthesis of research on competition in the financing and delivery of health services

The National Center for Health Services Research, recognizing the need for information on issues related to competition in the financing and delivery of health services, has developed and supported this project to conduct a synthesis of the research on competition in the market for health services. The objectives of this synthesis are: (1) to identify relevant research findings which provide insight into the issue of competition and its effects on the market for health services, and on approaches to improving the performance of this market; (2) to prepare an annotated bibliography which briefly summarizes and classifies the existing literature; (3) to synthesize the literature on the theory, evidence, and proposed application of competition to the financing and delivery of health services; and (4) to identify areas in which new and additional research is needed.

This report provides a comprehensive review of the existing literature on the nature of competition in the market for health services and is based upon a search of the literature which is contained in:

> *An Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services*, DHHS Publications No. (PHS) 82-3326.

Chapter 8 of this report summarizes the evidence within a general framework of proposed remedies and selected policy issues and is also contained in:

> *Research on Competition in the Financing and Delivery of Health Services: A Summary of Policy Issues*, DHHS Publications No. (PHS) 82-3328-1.

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[4] One alternative (or complementary) opinion is that providers—especially physicians—have colluded to create a market which they substantially control (Kessel, 1958; Havighurst, 1978).

Competition and the market for health services

The competitive environment

The characteristics of the market for health services which affect the extent and nature of competition are considered in this chapter. The structure of the market and the conduct of participants are described; then barriers to competition, and the impact of these barriers on the market, are discussed. The overall performance of the market for health services, along several dimensions, is then reviewed in order to determine whether the identified market imperfections have affected the functioning and outcomes observed.

Market structure and performance

A basic model of industrial organization, described by Scherer (1980), provides an appropriate framework for examination of the structure of the market for health services. This model is based on a fundamental assumption that what society wants from producers of goods and services is good performance. Good performance is defined by Scherer as encompassing:

- Efficiency in production and distribution, including responsiveness, qualitatively and quantitatively, to consumer demand;
- Progressiveness in the production processes, incorporating innovation and new technology;
- Facilitation of full employment of resources; and
- Equitable distribution of income, implying that suppliers do not receive payment for services substantially in excess of that payment required to induce the amount of services supplied.

Performance within an industry is assumed to depend on the conduct of buyers and sellers in the market. *Conduct* includes pricing policies, product strategies and advertising policies, research and innovation in the industry, investment levels, and legal tactics available in the industry. Conduct, in turn, is affected by the structure of the individual market. *Market structure* may be described by such factors as the number of buyers and sellers, the degree of product differentiation, barriers to entry, and cost structure, among others. The determinants of market structure are the *basic conditions* existing within the industry (e.g., public policies, price responsiveness of buyers, technology, type of raw materials, unionization).

This basic *structure, conduct, performance* paradigm provides a foundation for the examination of the market for health services and the extent to which unique conditions within this market affect its performance. Identification of these unique characteristics focuses attention on the problems to be addressed and the development of potential solutions.

Market structure and conduct of the market for health services

The competitive market structure was described in Chapter 1. In the health services market, the conditions necessary for the existence of a competitive market are not fully met. Basic conditions affecting market structure which have been discussed extensively in the literature are:

- Uncertainty with respect to the occurrence of illness and the efficacy of treatment which has led to the development of extensive insurance;
- The complexity and rapid technological change in medical services which has led consumers to delegate much decisionmaking to providers; and
- Societal commitment to the concept that access to essential health services should be guaranteed to all and has resulted in tax subsidies and public insurance programs for the poor and elderly.

An early attempt to isolate the unique features of the medical care market trace back to Arrow's (1963) classic article, "Uncertainty and the Welfare Economics of Medical Care." Arrow argued that uncertainty about the incidence of disease and the efficacy of treatment was the prime determinant of the "special" economic problems in medical care, and that many of the institutional characteristics of medical practice appear to have evolved as ways to provide measures of certainty to this market. Thus, medical education and strict licensure restrictions guarantee that the physician in practice has, at least, a minimal level of competence—an evaluation not possible for the consumer to make in advance of treatment. The inability of the consumer to be fully knowledgeable in choosing medical services leads to delegation of decisionmaking authority to the physician. The physician, in this role, may feel a social responsibility to provide the best possible care without regard to cost. Finally, the uncertainty about the incidence of illness leads to the purchase of health insurance.

The national commitment to equitable access to health care also has had an impact on the structure of the market for health care services. As a result of programs such as Medicare and Medicaid, as well as private health insurance, substantial numbers of persons face a low or zero out-of-pocket price for services. In addition, governmentally set prices for services provided to the eligible populations result in different prices for identical services provided to different populations (e.g., reimbursement for a day of hospital care under Medicare may be less than the reimbursement allowed under either Blue Cross or commercial insurance). Government policy toward health care is also reflected in the tax subsidies of health insurance and health expenditures, which result in lower real costs of these goods to consumers.

All of these factors create imperfections in the structure and the conduct of the market for health services. The major issues of concern for the purposes of this review are:

- Inadequate consumer information;
- Tax treatment of health insurance and medical expenses;
- Health insurance and reimbursement policies;
- Professional control of the industry;
- Nonprofit components of the market; and
- Constraints on consumer choices.

Each of these issues are discussed in the sections which follow.

Inadequate consumer information: Informed choice by *some* consumers is a precondition to the successful operation of the competitive market. Indeed, this view has been accepted by a wide range of researchers and policymakers. Davis (1975) states, "The nature of health care is such that the consumer knows very little about the medical services he or she is buying—possibly less than about any other service purchased" (pp. 22–23).

Pauly's (1978) categorization of medical care into three distinguishable groups—each of which has different implications with respect to consumer information — provides an alternative approach to this issue:

- *Group (1):* Services which are purchased relatively frequently by most households and about which consumers can be well informed (e.g., pediatric visits, normal obstetrical care, routine dental services).
- *Group (2):* Services a typical producer produces relatively frequently but which a typical consumer can consume only infrequently (e.g., appendectomy, treatment for pneumonia).
- *Group (3):* Services which a typical producer produces and a typical consumer consumes relatively infrequently (e.g., severe medical emergencies, experimental procedures).

Uncertainty and lack of appropriate information represent a problem for consumers facing decisions about Group (2) and Group (3) services. Group (1) purchases are made frequently by many consumers who may use their own past experiences, as well as those of others (Pauly and Satterthwaite, 1981), to guide their decisions. Pauly suggests that as much as one quarter or more of total personal health care expenditures might be regarded as "reasonably well informed." The consumer, even for Group (2) services, is not completely ignorant, in any case, since these services are frequently performed on other consumers who are willing (and often eager) to share their experiences and perceptions. As a result, consumers frequently have considerable knowledge and may be capable of making rational decisions, even when the decision is contrary to a physician's recommendation. McCarthy and Widmer's (1974) study of voluntary and mandatory second surgical opinion programs found that the voluntary programs resulted in much higher rates of unconfirmed surgery. This finding implies that some patients know when a recommendation for surgery may be questionable.

Weisbrod (1978) suggests that, while rising levels of education are making patients more skillful as consumers of medical care, advances in the state of knowledge have continually expanded the ability of professionals to diagnose and treat. As a result, the patient/consumer is continually uncertain as to whether some new development has made his/her knowledge obsolete. Weisbrod also suggests that consumers are generally informed "rather poorly" about the quality of care being purchased—even when the consumer *is* informed with respect to appropriate care. Providing consumers with additional information on price will not lead to "better" choices if consumers are poorly informed on quality. In fact, Weisbrod concludes that the inadequacy of consumer information is a sufficient problem that "nonmarket" solutions should be given careful consideration. Pauly, on the other hand, suggests that, for some types of medical care, consumer information is adequate to permit the market for health services to function. For rare and unusual services, however, government regulation *may* be appropriate.

In summary, there is nearly complete agreement among researchers and policymakers that consumers are ignorant of the appropriateness of *some* types of services and of the quality of *some* types of medical services. Disagreement on the extent and the implications of this ignorance exists, however. If consumer ignorance is extensive, then it is unlikely that a competitive market for health services can exist. On the other hand, if some consumers are relatively well informed about a relatively large share of medical services, that portion of the market for health services may operate competitively, in the absence of other barriers.

Public policy has been based upon an assumption that consumers *are* ignorant and that regulation, rather than the provision of more information, has been the government's preferred remedy. Consequently, the market for medical services has in place several constraints which act to ensure that consumers' choices are limited:

- Licensure of physicians and of other types of providers, with unlicensed providers forbidden to provide services; and
- Requirements that certain types of medical care cannot be directly purchased by a consumer (e.g., prescription drugs) but, instead, must be ordered by an intermediary.

These regulations, in turn, have an impact on the market for health services and on its performance.

Tax treatment of health insurance and health services: The federal government has accorded health services preferential taxation status for many years. The government's role in increasing the quantity of medical services consumed is accomplished through two methods: (1) direct purchase of health care through Medicare, Medicaid, and other programs (discussed below in the section addressing health insurance issues); and (2) tax deductions (or credits) for health care related expenditures. The effect of the latter on the market for health services recently has been the topic of considerable research and policy discussion (Wilensky, 1982).

There are four types of tax subsidies for health care currently offered by the federal government.[1] These are (U.S. Congress (CBO), 1980):

- Exclusion from taxable income of employer contributions to employee health insurance plans;
- Deductions for health insurance premiums and large (relative to income) out-of-pocket medical expenses;
- Deductions for charitable contributions to not-for-profit medical facilities; and
- Tax-exempt bonds offered for the financing of hospital facilities.

The latter two tax subsidies have resulted in approximately $1.8 billion in government subsidies (tax expenditures) to non-profit providers of health care in 1979, with a consequent expansion of hospital facilities (CBO, 1980). While this is not an insignificant subsidy, the attention of economists and policy analysts has focused on the far more substantial exclusions and deductions for insurance and out-of-pocket health costs. CBO (1980) estimated that, in 1979, excluding employer-paid health insurance from employees taxable income resulted in a $9.6 billion subsidy of private health insurance. The tax deduction for out-of-pocket premiums and health care expenses resulted in another approximately $3.1 billion subsidy of health insurance and health services expenditures.

As Vogel (1980) points out, the federal exclusion of the employer's contribution to health insurance premiums has apparently been allowed since the beginning of the tax law, although formal recognition of this exclusion was first incorporated into the 1954 revision of the tax law. The deduction of out-of-pocket expenses for health insurance premiums and health care was introduced into the tax law in 1942[2] and has been modified six times (the latest in 1967). The trend in the tax law has been toward increasing the subsidy of health insurance and health care. Rivlin (1979) points out that the total tax subsidy to private health insurance in 1980 was approximately $10.6 billion, nearly as much as the $13.8 billion estimated cost of the Medicaid program in 1980 and nearly one-third of the estimated $32.1 billion spent under Medicare in that year.

[1] State governments also offer tax deductions and exclusion for health care. However, the focus in this paper is on federal actions and policies. It has been estimated that state income tax expenditures for health care were approximately $2 billion in 1979 (Steuerle and Hoffman, 1980).

[2] For a discussion of historical development in tax policy on health care, see: Mitchell and Vogel (1973) or Steurele and Hoffman (1980).

The effects of the tax subsidization of health insurance and health care have been the topic of numerous policy deliberations (Mitchell and Vogel, 1974; CBO, 1980; Vogel, 1980; Rivlin, 1979; Steuerle and Hoffman, 1980—among others). The major conclusions that have been reached include:

- Tax subsidies create an increased demand for health insurance which results in consumers "overinsuring" (i.e., acquiring insurance that costs more than the value of the benefits it provides to the individual or society).
- Tax subsidies stimulate increased demand for health services, since the cost of services are, in part, offset by insurance and tax deductions.

Mitchell and Vogel (1975) use Internal Revenue Service data to examine the impact of the tax subsidy on the purchase of health insurance. They find that a tax subsidy of as little as 10 percent is sufficient to create a positive incentive to buy group insurance rather than to pay health expenses out of pocket, since the tax subsidy causes the cost of insurance to be lower than expected benefits plus administrative costs of insurance. Indeed, they suggest that, "Families who purchase group insurance will on the average have lower total medical bills than they would if they paid their health expenses directly, and employees have a financial incentive to buy the most comprehensive insurance they can obtain through their employer's group policy (even when their employer makes no contribution to the premium charged). If employers pay some part of the premium, employees gain a still larger tax subsidy, since employer payments are completely untaxed" (p. 669).

Feldstein and Friedman (1977) estimate the optimal coinsurance under various assumptions of tax subsidy levels, risk aversion, and price responsiveness of consumers. Their analysis indicates that, in the presence of a tax subsidy, consumers would choose to pay only 40 percent of health care costs out-of-pocket and would insure against 60 percent of health costs. Without a tax subsidy, Feldstein and Friedman estimate, consumers would pay 55–60 percent of health care costs out of pocket and would insure against only 40–45 percent of health costs.

There seems to be little doubt that tax subsidies to health insurance and health services expenditures lead consumers to purchase more insurance and more medical care. The critical questions are:

- Does the subsidy remove incentives for consumers to shop for the lowest possible price for insurance and for medical services?
- How much more insurance and medical care are purchased by consumers as a result of the tax subsidy?
- Is the increased consumption of medical services, and its cost, greater than the value of the benefits which result?

Currently, opinions on the effects of the tax subsidy to health services are divided. Helms (1978) suggests that the medical tax deduction is the primary factor behind the increasing cost of medical care, and advocates market reform. Vladeck (1981) states, "Consumers have sought the kinds of health insurance they have, not because they wish to act irrationally in the aggregate economic sense, but precisely because they don't wish to be forced to make rational tradeoffs when they are confronted with medical care consumption decisions" (p. 211). He further suggests that the "relatively insubstantial tax subsidies" play only a minor role in consumer behavior in this market.

To the extent that overinsurance exists, changes in the amount of the tax subsidy might reduce the extent of this problem. It is uncertain, however, whether consumers choose to purchase excess insurance *only* because of tax subsidies.

Health insurance and reimbursement policies: Insurance has developed in many markets as a means of spreading substantial financial risks across a large number of individuals. In the market for health services, uncertainty about the occurence of illness combined with potentially large costs of medical care have led to a demand for health insurance which permits households to pool resources to meet the contingency of illness through a prepayment mechanism. In addition, tax incentives (discussed in the immediately preceding section) have encouraged employees to seek and bargain for employer-subsidized health insurance premiums as a fringe benefit to employment.

Two other factors have stimulated the growth of private insurance. The tax-exempt status of Blue Cross and Blue Shield permits them to offer health insurance coverage at a minimal mark-up. In addition, the group-based purchase of health insurance results in lower premium costs as the cost is spread over a larger population (Zubkoff and Blumstein, 1978). At the same time, public third-party payment for services through Medicare and Medicaid has emerged to increase access to health care for those less able to afford it.

As mentioned previously, there is concern that many individuals in the United States are overinsured. The primary cause of this phenomena, it has been suggested (Arrow, 1963; Pauly, 1968; Newhouse, 1978; Budde and Meeker, 1978; Pauly, 1980;

Helms, 1978; and others), is the tax subsidy to health insurance. Overinsurance, in combination with the existence of "moral hazard," becomes manifest as higher expenditures for health services.

Moral hazard has been defined as changes in the behavior of consumers of health services which are induced by health insurance coverage of the consumer (Pauly, 1968; Marshall, 1976; Frech and Ginsburg, 1975). Three types of moral hazard have been identified in the literature (Budde and Meeker, 1978):

- Increased use of insured services;
- Reduced concern about the relative cost of providers; and
- Reduced efforts to maintain health.

Pauly (1968) points out that, from the point of view of the consumer, the "moral hazard" issue is not a moral one at all. Insurance simply reduces the price of the service to consumers, and they act accordingly. The purpose of the deductibles and coinsurance requirements written into most insurance policies is to constrain consumers from excessively utilizing services and to provide some incentive for price consciousness.

The consequence of moral hazard, however, is that increased utilization of services results in higher prices for all medical services which, in turn, leads to an increase in the demand for more comprehensive health insurance to protect consumers against the higher cost of care. With more coverage, consumers are induced to utilize health services even more, leading to further increases in the price of services, and greater demand for insurance against risk.

Insurance, whether excessive or not, is associated with decreased incentives for patients to search for the lowest prices for the services obtained. As a result, the degree of price competition in the market is considerably reduced. Many insurers, including Medicaid, reimburse providers on a service benefit basis. A service benefit provides the patient with services rather than dollars. Thus, it actually provides the consumer with incentive to enter the most expensive hospital, or choose the most expensive physician (presumably, higher cost implies higher quality), because the consumer is able to obtain what he/she believes is higher quality care at little or no additional out-of-pocket cost. As a result, hospitals and physicians are not required to compete for patients on the basis of prices (P. Feldstein, 1979; Frech and Ginsburg, 1975) and the cost-reimbursement of hospitals and "usual, customary, and reasonable (UCR)" reimbursement of physicians is associated with continually rising prices of care. The consequences are:

- Consumers often obtain higher quality, more expensive medical care when they are insured.
- Providers of medical care may not compete on the basis of price for patients, but instead are encouraged to provide comprehensive and high quality care without regard to cost.
- The cost of health services rises at an above-normal pace, creating incentives for consumers to demand more comprehensive insurance with lower coinsurance and deductible requirements.

Although there appears to be substantial agreement on the effects of insurance on the market for health services, a number of issues have not yet been fully resolved:

- *Does "overinsurance" exist?* While most researchers suggest that, currently, many people have insurance with benefits which are less than the full cost of insurance, some observers (Vladeck, 1981) suggest that this phenomena merely reflects the preferences of consumers to avoid having to give primary consideration to economic factors when medical care is needed.
- *If "overinsurance" is present, what is the cause?* Tax subsidies encourage overinsurance by reducing the cost of insurance to the consumer. However, some researchers suggest that overinsurance would occur in the absence of tax subsidies. The policy implications differ, depending upon the conclusion.
- *Is overinsurance undesirable?* One purpose of insurance and government programs is to increase access to medical care. Therefore, it is desirable that demand for health services increase in the presence of third-party payment for services. How much of the increased demand is for services which are beneficial, to the consumer and/or society, is an area that is relatively unexplored.
- *How much of inflation in medical care costs can be attributed to reimbursement policies under third party payer programs?* The increasing per-unit costs of care may reflect the impact of increased demand for services on a limited supply of services, increases in the quality of care, technological change, and/or high returns to providers as a result of price insensitivity of consumers. Evidence on the magnitudes of these components of price increases would be of use in designing reimbursement policy.

It should also be stressed that the impacts of insurance and of reimbursement policies vary substantially for specific health services submarkets for two reasons: (1) the extent of insurance varies (e.g., over 90 percent of hospital services were insured, while only 15 percent of dental services were insured in 1977); and (2) the reimbursement method varies by type of service (e.g., cost reimbursement of hospitals, UCR reimbursement of physicians). Evidence on the implications of insurance and reimbursement policies for a competitive market must be deferred to later chapters which examine each of the component services within the market for all health services.

Professional control of the market: It has been suggested that physicians control a major portion of total health care expenditures. Although individual patients make an initial decision to visit the physician, the physician then takes "control" of the patient's subsequent demand for health services at least insofar as it is related to the reason for the initial visit. The consumer lacks the necessary medical knowledge to diagnose, treat, or to judge the quality of care offered. Thus, responsibility for much medical decisionmaking is delegated to the physician. M. Feldstein (1973) characterizes this as an "agency relationship," where the physician acts as purchasing agent for the patient.

The legal and institutional structure of the market for health services reinforces the patient's need to delegate authority to the physician. Even if the patient has adequate knowledge to permit self-diagnosis and treatment, he/she could not legally order many diagnostic tests and prescription drugs, nor could the patient be admitted to the hospital without a physician's order.

The importance of this relationship between the physician and the patient for the functioning of the market for health services depends upon the motives of physicians and/or the incentives physicians are responding to, and the extent of "monopoly" power held by the physician or by physician organizations. Juba (1979) describes several variants of the extent of potential monopoly power held by physicians which have been developed by economists:

- Physicians may act in unison and set prices based upon group goals, i.e., physicians' associations may act as cartels exerting "collective monopoly" power;
- Physicians may have some monopoly power but, at the same time, be affected by pricing decisions made by large numbers of similar firms in the market area; and
- Physicians may be "simple monopolists" and set prices without considering other physicians at all.

Havighurst (1978) cites evidence that physician associations (and other provider groups) are substantially responsible for the essentially noncompetitive nature of the market for health services. He advocates vigorous enforcement of the existing antitrust laws. Several economists have presented arguments which support Havighurst's contention (Kessel, 1958; Rayack, 1967; P. Feldstein, 1977). These arguments suggest that organized medicine controls the market through:

- Restrictions on entry through its power to control licensure of physicians and accreditation of medical schools;
- Opposition to the development of alternatives to fee-for-service medical practice;
- Bans on advertising of services and prices which result in limits on information available to consumers;
- Dominance of insurance plans such as Blue Shield, with the ability to exert substantial power over fee levels; and
- Control of hospital admitting privileges.

The major issues are (1) whether physicians act together through professional associations to exert some measure of power over prices and conditions in the market for health services and (2) whether their efforts are successful. Although some evidence is available (particularly with respect to restrictions on entry), no conclusive findings are reported. Sloan and Feldman (1977) reject the theory that organized medicine acts in a consistent manner to set prices, since there is substantial price variation in local markets and because they suggest that it would be nearly impossible for physician associations to "police" the price decisions of members.

P. Feldstein (1977), on the other hand, suggests that organized medicine is a powerful cartel with substantial power to affect the market for health services. He argues that because separate members of health associations cannot achieve a monopoly position through the competitive process, they seek to achieve it through legislation that will "increase the demand for their services, permit them to price as would a price discriminating monopolist, lower their costs of doing business, and disadvantage their competitors either by causing them to become illegal providers or by raising their prices" (pp. 400–401).

In general, while there is a considerable amount of speculation on the ability of health care providers to act in unison through professional associations, the evidence that this has occurred is limited. In addition, there has been little investigation of the impact of organized medicine on the market for health services. It seems clear that the role of organized medicine in licensure and medical school accreditation has, in the past, had the potential to restrict the number of providers and, potentially, to increase the incomes of practitioners. However, in the past two decades, the medical profession has increased its members at a particularly rapid rate through expansion of medical school capacity and admission of foreign medical granduates to the U.S. The ability of organized medicine to restrict the supply of physicians' services appears in doubt.

It also has been suggested by some researchers that individual physicians are able to create demand for their services (Evans, 1976; Evans, *et al.*, 1973; and others). The importance of this issue for policy formulation is substantial. If physicians can create demand for their services, then policies designed to increase competition among physicians and other providers would merely cause physicians to generate new patient demand. More efficient production of services, and reduced expenditures and utilization, would not necessarily result.

The source of this power to generate demand derives from patient ignorance and willingness to delegate decisionmaking to the physician. In addition, the presence of substantial insurance coverage for health services causes patients to have little incentive to become sufficiently informed to monitor the physician's decisions on their behalf.

The presence and extent of supplier-induced demand has been argued by economists for several years. Evidence that it exists has primarily been the result of studies that find that fees are higher in areas where the physician supply, relative to population, is greatest (Newhouse, 1970; Newhouse and Phelps, 1974 and 1976; Redisch, *et al.*, 1977). Additional evidence exists that per capita utilization of physicians' services is higher in areas with more physicians relative to population (Fuchs and Kramer, 1972; May, 1975; Newhouse and Phelps, 1976; Davis and Reynolds, 1976). Economic theory predicts that as the supply of any good or services increases, the price will fall, *all other things equal.* The fact that some (but not all!) economists have found supply and fees to be positively related in the physicians' services market does not, however, prove that supplier-induced demand exists. Many other factors in the markets examined may explain this seemingly perverse relationship.

Sloan and Feldman (1978) review the evidence on supplier-induced demand and conclude that it is relatively weak. They suggest that quality of care and amenities associated with provision of medical services may explain much of the observed association between physician density and fee levels. Sloan and Feldman conclude:

> Supplier-induced demand is not an "all or nothing" matter in which opponents of the supplier-induced demand notion are forced to find evidence ruling out supplier-induced shifts entirely. Rather, at issue, is whether supplier-induced demand represents a major demand determinant (p. 118).

Reinhardt (1978) suggests that the ability of physicians to induce demand for services will probably vary by type of service, regardless of the insurance status of patients. Patients may become sufficiently informed on some frequently purchased services to reduce physician power; and the time costs to patients of some procedures may constrain demand inducement. A recent study by Mitchell and Cromwell (1981) suggests that physicians do have the power to induce demand for surgical services. They report that a 10 percent increase in surgeons per capita results in a 1 percent increase in total surgery rates, and a 1.3 percent increase in elective surgery. However, Yett (1978) notes that patients in areas with relatively fewer physicians may be able to obtain fewer services than they would prefer, due to the lack of adequate supply of physicians. The positive relationship between physician density and per capita utilization then would reflect the shortage of physicians in low physician density areas, rather than supplier-induced demand in high physician density areas.

Competition and its effects in the market for health services are related to the extent of market power possessed by providers. Although there is considerable speculation that physicians, particularly, possess some market power and that this has negative implications for market performance, Auster and Oaxaca (1981) review a number of studies addressing the issues of supplier-induced demand and conclude that no empirical evidence has yet been provided. The critical issues in this market which remain unresolved are:

- Does organized medicine exert monopoly power in the market for health services and, if so, how much and what are the effects?
- Do individual physicians have the power to induce demand for their services? If so, how significant is this power?

The implications of these questions for the performance of the market for health services are obvious. Havighurst (1978) has prescribed active antitrust enforcement as a remedy for the former problem. Constraints on physician supply and utilization review have been suggested as partial solutions to the second, as has the elimination of fee-for-service medical practice.

Nonprofit organizations in the market for health services: Many of the providers of health services in the United States are nonprofit organizations. Nearly all hospitals, many nursing homes, home health agencies, and insurers, among other health providers, are not profit-seeking. In addition, there has been, in the United States, a strong philanthropic tradition in the market for health service. Arrow (1963) suggests that this may be due to the belief that professional ethics require that the economic interests of the provider do not interfere with doing what is best for the patients. The nonprofit status of many health facilities and insurers suggests that the market does not function, on the supply side, as a normal competitive market. When providers are not attempting to maximize profits, there may be reduced incentive to produce services using the least costly resources available. The alternative objectives of decisionmakers, in the absence of a profit motive, and the implications of these alternative objectives for the performance of the market for health services have also been debated.

The effect of nonprofit institutions on conduct and performance in the market for health services is to reduce the benefits associated with competitive markets. In addition, the not-for-profit status of health facilities may serve as a barrier to entry to new profit-seeking providers which might exert competitive pressure on existing providers.

An equally important effect of the substantial presence of nonprofit providers in this market is the tendency to invest in expansion of facilities and acquisition of new capital equipment with inadequate attention to the potential demand for these facilities and technologies. The availability of low-cost financing under the Hill-Burton program for construction of nonprofit hospitals lead to considerable expansion of the number of hospital beds per capita over the past three decades. The tendency to expand capacity beyond the level which would be supported by normal market forces is reinforced by the tax-exempt status of nonprofit health providers. Tax exemption also gives nonprofit providers a competitive advantage over for profit providers which causes fewer for-profits to enter the market and, consequently, leads to reduced competition in the market.

It has also been argued that the substantial proportion of health insurance provided by nonprofit insurers has had an impact on the market (Frech and Ginsburg, 1978). The nonprofit nature of these firms is associated with an ideological preference for comprehensive, rather than limited benefit or catastrophic, insurance (Berman, 1978). As a result, the Blue Cross and Blue Shield Associations choose not to compete with for-profit and other nonprofit insurers for the portion of the insurance market which services those individuals and firms which prefer policies with substantial cost sharing provisions. The lack of a necessity to pay dividends to owners and the nonprofit tax exemption allows nonprofit insurers to offer more comprehensive benefits for less cost than can for-profit firms.

Constraints on consumer choices: One basic requirement for a competitive market to develop is that buyers and sellers must be free to enter and leave the market. As mentioned earlier in this chapter, there may be barriers to entry facing potential sellers in the market for health services (i.e., lengthy training and licensure for physicians, or the presence of a substantial nonprofit segment in the hospital sector). Buyers of health services also face barriers which prohibit them from freely choosing among available alternatives. These constraints include:

- Substantial ignorance about medical services, which results in the transfer of decisionmaking power from the consumer to the provider;
- Legal and institutional barriers to consumers' direct purchase of many goods and services in this market; and
- Limited alternatives in the purchase of health insurance policies.

The first two constraints have been discussed in some detail earlier in this chapter with the conclusion that consumers directly choose less than one-half of all the health services they consume. Thus, due to a lack of information and to the presence of legal and institutional barriers, the consumer may have little direct control over demand for some types of services in this market.[3] The result is a reduction of efficiency in this market because consumer preferences can't be expressed directly. However, the remedy for this limitation on consumer choices is not immediately apparent and no real solution has been proposed.[4]

The final constraint on consumer choices listed above has been discussed widely by economists and policy makers. The development of group health insurance has been characterized by limited choice of benefits and depth of coverage, as well as cost of insurance. The primary reason for this constraint has been the employer's reluctance to complicate the provision of fringe benefits by offering alternatives. This factor has had a constraining effect on the growth of prepaid group practices and other competing alternative health care delivery systems, in the past. In addition, the fact that fringe benefits are excluded from taxable income and employers frequently pay a substantial share of the premium cost causes employees to be relatively insensitive to the price of group insurance.

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[3] However, the patient (nearly) always retains the right to reject the physician's advice. The fact that there is a fairly large body of medical literature on "patient compliance" suggests that many patients exercise this right.

[4] Except by some staunch "free market" proponents (e.g., Friedman (1962) who supports an unregulated health services market—including elimination of licensure for physicians).

Concern about the performance of the market for health services has resulted in federal legislation which requires that most employers offer an HMO option to their employees along with traditional health insurance coverage, if an HMO is available in the locale. This mandated increase in consumer options may lead to increased competition in the health services market. Other proposals to increase the choices available to consumers (e.g., offering vouchers to Medicare recipients; see Ginsburg, 1981, for a recent discussion of this issue) may result in similar improvements in the efficiency of this market.

Performance of the market for health services under existing conditions

The structure and conduct of the market for health services has been described in some detail in the preceding section. That presentation suggested that the characteristics of this market violate the basic conditions necessary for competition. As stated in Chapter 1, however, a distinction should be made between perfect competition and "workable" competition. While conditions in the market for health services represent a departure from ideal competitive conditions, the performance of the industry along some dimensions may be consistent with the goals of society and even with the desired competitive outcome. An examination of market performance with respect to some of these dimensions follows.[5]

It will be assumed, for this examination of the performance of the market for health services, that society has determined that health care is a right and that every individual should have access to necessary services. In addition, since the costs of a substantial share of medical care are paid by government, performance in the market with respect to costs of medical care has significant implications for government budgeting. Thus, the performance indicators to be reviewed in this section are:

- Access to care;
- Costs of care;
- Efficiency; and
- Innovation and dissemination of technology.

Access to health care: Equity in access to health services has been an explicit policy objective of the federal government for many years. The Medicare and Medicaid programs, as well as tax subsidies for health-related expenditures, are designed to achieve this objective.

Data on utilization of health services (USDHHS, 1981) suggest that equity in access to basic essential services is being approached for physicians' visits. Approximately 75 percent of the population in 1979 had visited a physician within the previous year. Blacks were only 0.6 percent less likely than whites to report having seen a physician during the previous year. Differences by income in the likelihood of having seen a physician during the preceding year were small: 75.7 percent of poorest families and 76.9 percent of high income ($25,000 or more) families in 1979 reported a physician visit during the previous year.

The average number of office visits per person in 1979 is also similar by race and income category.[6] Members of middle income families saw physicians less frequently than did either the very poor or the high income population. Comparisons by race and sex reveal pronounced differences in utilization of hospital services, however. Blacks were more frequently hospitalized in 1979 than were whites, and family income was negatively related to likelihood of hospitalization.

These findings are substantially different than similar data reported (Danchik, 1975) for earlier years. In 1963, 75.4 percent of white persons reported at least one physician visit in the preceding year, while only 56.2 percent of individuals of other races had visited a physician in the previous year. Members of the poorest families reported that only 59.5 percent had visited a physician during the preceding year compared to 75.4 percent of the highest income family members. Similar patterns in number of visits per person per year were observed: the poor and nonwhites in 1963 saw a physician less often than did the higher income individuals and whites.

The evidence suggests that the market for health services has improved its functioning for the access dimension of market performance. While there may be some gaps in coverage, racial and income-based disparities in utilization of health services have been substantially reduced over the past decade and a half.[7] [8]

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[5] Scherer (1980) suggests several dimensions of market performance which may be examined to appraise the competitiveness of any market: (1) allocative efficiency; (2) efficiency of resource use; (3) equity of income distribution; (4) progressiveness; and (5) macroeconomic stability.

[6] The average black person visited a physician 4.5 times in 1979, while the average white person saw a physician 4.8 times in that year. Persons in the lowest income groups saw a physician 5.4 times in 1979, compared to 4.7 visits by individuals in the highest income families.

[7] However, there is evidence that the poor population has substantially worse health than does the nonpoor (Newachek, *et al.*, 1980; Kleinman, *et al.*, 1981; and others). It is possible, therefore, that physician visits, relative to health status, are *not* equitably distributed.

Costs of health care: The ability of society to provide access to health services to all depends, in part, on financial considerations. Two aspects of costs of health services are important: (1) the level and rate of increase in total expenditures; and (2) the level and rate of increase of prices.

Expenditures for health services reached $247.2 billion in 1980 (Gibson and Waldo, 1981) from a level of only $41.7 billion in 1965. This dramatic increase in expenditures occurred over the period that Medicare and Medicaid were implemented to assure that the poor and the elderly would be able to obtain health services. Therefore, the rise in expenditures for health services, in part, reflects increased utilization of health services by a portion of the population which had lower utilization patterns in the past.

Medical care prices have consistently risen faster than the general price level in the economy. Since 1950, the overall Consumer Price Index (CPI) more than tripled; the medical care component of the CPI, however, quintupled. Within the medical care component of the CPI, medical care services over this period have increased in price much more rapidly than have medical goods (e.g., drugs).

Weichert (1981) estimates that increased consumption of medical services accounted for 33 percent of the increase in health care expenditures between 1965 and 1980. Weichert also estimates that population size and composition changes accounted for 9 percent of the increase in health expenditures for the 1965–80 period. Weichert estimates that price increases accounted for 58 percent of the growth in health spending between 1965 and 1980.

Economists expect that when demand for services increases, the result will be an increase in the price level in the short run, since supply may be able to respond only slowly or after some time has elapsed. The introduction of Medicare and Medicaid and the growth in private insurance have resulted in increases in demand for health services and have led to consequent price level increases. However, some part of this increase in prices (and expenditures) may be attributable to imperfections in this market. Unfortunately, no empirical evidence is currently available on what proportion of increased expenditures and prices may be the result of imperfections in the market for health services. It is not possible, at the present, to say that an increase in competition in this market would lead to a known reduction in total expenditures or in the rate of growth of prices. While these may seem likely outcomes, the *extent* of such changes cannot be estimated.

The implications of rapid cost increases in this market are severe because the ability of society to ensure access to health care depends on the impact of this policy on the federal budget. Rapidly rising federal expenditures for health programs jeopardize health programs and potentially the stability of the federal budget, as a whole. Consequently, much of the attention directed to the performance of the market for health services has focused on costs.

Efficiency: Costs of health services are, in part, dependent upon the efficiency of the market. Three dimensions of efficiency will be briefly considered in this section.

- Are consumers obtaining an appropriate quantity and mix of services?
- Does the value of the services received by consumers approximate the full cost of those services?
- Are health services being produced using the least costly combination of resources?

It is difficult to analyze the issue of whether the benefits from services approximate the costs of those services. When *no* benefit is derived, then this issue is clear. For the vast majority of medical services, however, patients derive some benefit either in terms of information, reduction in anxiety, or an improvement or maintenance of health. Public policy toward equity in access to care suggests that consumers should not be constrained from obtaining beneficial health services by an inability to pay. Society, therefore, may assign a greater value to the individual's health than does the individual, as evidenced by his/her willingness to pay. Thus, the issue of benefits of services versus costs of services ultimately involves a value judgment. Although a body of literature exists that attempts to measure the economic value of preventing death (see, for example, Schelling, 1968; Rice, 1966; Mushkin, *et al.*, 1978), it is highly unlikely that government will decide that health services should be available to the individual up to the point where the cost of treatment equals the total potential future contribution of the individual to economic activity.

The performance of the market for health services with respect to efficiency in production has been addressed by researchers only in a piecemeal fashion. As has been mentioned above, the use of resources to produce services of *no* benefit to consumers is one measure of inefficiency in the market. The efficiency of the methods used to produce services of benefit to consumers has been investigated by economists and engineers. The hospital sector operates under conditions which provide few incentives to minimize the cost of resources to produce hospital services. The nonprofit nature of this industry, the presence of virtually complete insurance for hospital services, and the use of cost-based reimbursement systems seriously undermines incentives for productive efficiency. However, it should be recognized that hospitals do attempt to utilize resources efficiently once they are obtained (Langwell and Deane, 1980).

In summary, the evidence suggests that inefficiencies exist in the market for health services due to structural conditions and, perhaps, due to society's judgment that equity in access to care should prevail. While the latter cause will not be addressed here, it is possible that increasing the type and extent of competition in the market for health services might lead to gains in efficiency and, therefore, to improved performance.

Innovation and dissemination of technology: The view that new medical technologies are adopted without consideration of their potential costs or benefits has become widespread. In a competitive market, it is assumed by economists that new technologies are a major source of increased productivity and lower costs. However, in the market for health services, many observers suggest that new technologies are responsible for driving up health care costs (Russell, 1978; Cotterill and Gaffney, 1978; Altman and Blendon, 1979; among others).

Hospital-based technologies have been the focus of those researchers who have considered the issue of technology and inflation in this market. Russell (1978) attributes the presence of extensive third-party financing of hospitals services as the cause of adoption of medical technologies of relatively small benefit compared to acquisition and operational costs. Reimbursement to hospitals is primarily based on costs, permitting the cost of new medical technologies to be passed on by hospitals to third party payers. As a result, it may be assumed that new technologies will be adopted if they generate any benefits, no matter how small, for patients or for providers. Thus, the *cost* of the technology becomes irrelevant in this decision making process; only the potential *benefits* to be derived need be considered by the decision maker.

While the description above oversimplifies the process by which new medical technologies are adopted, there are few barriers to adoption of new technologies. Existing health planning legislation may provide a means to slow the dissemination of technology through certificate-of-need (CON) requirements. However, the evidence on CON indicates that this has been relatively ineffective in constraining the growth and dissemination of new technologies (Salkever and Bice, 1980; Wendling and Werner, 1980).

Development of new technologies has occurred at a rapid pace in response to the ability of the market for health services to absorb these innovations. Peterson and MacPhee (1973) investigate the conduct and performance of the medical equipment and supply industry. Their results indicate that above-average increases in prices and high profits are present in this industry. In addition, they find that research and development expenditures exceed the national average. An absence of cost minimization incentives on the part of buyers (i.e., hospitals and physicians) of medical equipment and supplies is identified as the underlying cause of the poor performance observed in this industry.

Altman and Blendon (1979) summarize the results of a conference on the role of medical technology in health cost inflation. The consensus among participants was that, while it is difficult to measure costs and benefits of medical technology, more is probably being spent for technologically related activities than can be justified by their medical benefits. There are few deterrents to the adoption and use of new medical technologies and, under present payment systems, hospitals and physicians often benefit financially from the use of new technologies. The participants of the conference suggest that medical technology *per se* is not the cause of rising health care costs; the real problem is the absence of incentives for containing costs in the market for health services.

If innovation and dissemination of new technologies is an indicator of good performance in economic markets, then it would seem that the market for health services performs well along this dimension. However, it is possible that conditions in this market lead to excessive innovation and dissemination at a pace not justified by the benefits to be achieved through new technologies. This view suggests that the market for health services is not functioning adequately, and that policies to increase competition may lead to improvements in the performance of this market. If competition increases in the health services market, providers and consumers are expected to become more sensitive to the costs of technology. Consequently, the rate of technological change might be expected to decrease if a competitive approach is adopted.

Summary

The examination of structure and conduct in the market for health services reveals that substantial imperfections exist in this market. Price competition is virtually nonexistent in some sectors of the market; barriers to entry exist for both providers and consumers; and information is inadequate to permit rational choices, in many instances. As a result, performance in the market for health services is poor along several dimensions. Costs of care are rising rapidly, creating serious budgetary difficulties at the federal level. Inefficiency in the provision of services and in resource usage is evident.

One contributing factor to poor performance is the commitment to equity in access to health care which has become public policy during the past two decades. The market, as it is currently structured, has performed well by this standard. Differences in access to health care have diminished dramatically since the mid–1960s. The price of achieving this objective, however, may have been higher than policy makers had anticipated. Other changes in the market for health services will be necessary if the market's performance is to be improved.

The market for health services contains some competitive elements despite the substantial market imperfections which have been described in this chapter. An in-depth examination of the nature and extent of competition in the major submarkets in this industry is presented in the following chapters.

Evidence on competition in the market for hospital services

Overview of the market

The hospital industry is both the largest and the most extensively regulated component of the market for health services. Prior to 1950, most regulations affecting hospitals were designed to promote quality assurance through licensure and accreditation. In recent years, the performance of the hospital sector with respect to cost inflation, combined with increased government payment for hospital services, has produced a wide variety of regulations directed to control of overall costs and of specifically targeted sources of costs.

The performance of the market for health services has been documented in Chapter 2. Hospital costs have risen more rapidly than have most other costs in this market. Expenditures for hospital care accounted for 40.3 percent of total health care spending in 1980 and increased 16.2 percent between 1979 and 1980 (Gibson and Waldo, 1981). Dramatic increases in expenditures for hospital care have been observed for more than two decades. While a share of this increase is attributable to increased utilization by a growing and aging population, it has been estimated that as much as 70 percent of growth in expenditures may be attributable to price inflation (Gibson and Waldo, 1981).

This fact, and the rapidly increasing costs to the federal government of hospital services, has caused substantial attention to be devoted by researchers to the structure of the hospital industry, and to the conduct of the buyers and sellers in this market, in attempts to understand and to develop appropriate remedies for the poor performance evidenced by this rapid inflation.

Three characteristics of the hospital services market have been identified as affecting the deviations from the competitive ideal in this market:

1. The predominance of nonprofit firms in the industry;
2. The extent of third party payment for hospital services; and
3. The dominant role of the physician in the hospital market.

The implications of each of these characteristics for the type and extent of competition in the hospital services market are reviewed in the following sections.

Nonprofit hospitals: In 1928, for-profit hospitals accounted for 44 percent of all hospitals in the United States and 17 percent of beds; by 1950, for-profits accounted for only 24 percent of hositals and less than 10 percent of beds (White, 1981). By 1978, only 13 percent of community hospitals were for-profit (AHA, 1979). A notable characteristic of the hospital industry today, then, is the overwhelming proportion of providers operating as not-for-profit entities.

In a perfectly competitive market, it is assumed that the competitors attempt to maximize profits. Competing firms will attempt to minimize costs and investment decisions will be based on anticipated profitability. For the overwhelming proportion of firms in the hospital market, these assumptions may be invalid. The conduct of the nonprofit firm is unlikely to be identical to that of a for-profit firm. A number of different theories have been developed to explain the behavior of nonprofit hospitals and about which group within the hospital has ultimate decisionmaking power. Alternatives which have been suggested include:

- Hospitals maximize the quantity of patients seen, but also consider factors such as the prestige of attending physicians' budget, and capital fund levels (Lee, 1971; Reder, 1965; Rice, 1966; Ginsburg, 1972).
- Hospitals want to produce the maximum amount of some combination of quantity of patients and

quality of care within the limits of budget (Newhouse, 1970; Feldstein, 1971; Joseph, 1974).

- Hospitals behave as for-profit firms in an attempt to gain maximum cash flow in order to expand their capital facilities continuously (Davis, 1972).
- Hospitals attempt to maximize the incomes of staff physicians (Taylor, 1972; Pauly and Rediseh, 1973; Pauly, 1977).
- Hospitals are organized as two separate firms, the medical staff and the administration; objectives are separate and intrahospital power struggles determine outcomes (Harris, 1977).

Alternative opinions on what groups within the hospital have ultimate decisionmaking power include: (1) the administrator; (2) a combination of groups (i.e., administrator, Board of Trustees, and staff physicians) which gain shifting amounts of power; and (3) staff physicians. One reason that there has been no resolution of the issue of the major decisionmaker is that the implications of the alternatives proposed are very similar. In addition, these implications are consistent with the observed actions of hospitals which have most frequently been cited as responsible for rising expenditures and costs in this industry:

1. A tendency to expand the number of hospitals and the number of hospital beds, even when occupancy rates are low; and
2. An emphasis on increasing the quality of medical care by adding labor inputs per unit of output and by adopting new technologies without regard for their relative benefits and costs.

Since hospitals are not maximizing profits, there are few of the conditions present on the seller side of this market which would lead to the outcomes expected in normal economic markets. This is compounded by unique characteristics on the buyer side: (1) a reduced consumer price sensitivity due to almost universal third-party payment for hospital services; and (2) the delegation of buying power to physicians who act on behalf of consumers.

Third-party payment for hospital services: Only 9.1 percent of expenditures for hospital services in 1980 were paid directly out of pocket by consumers. Private insurers accounted for 35 percent of these expenditures, while public and charitable sources paid for 56 percent of hospital services. Since most consumers are not directly responsible for payment of hospital services incurred, there is little incentive for them to "shop around" for the hospital which will provide the desired quality of service at the lowest price. Indeed, there are incentives for the consumer to search for the hospital which provides the highest quality of care, without respect to cost. In addition, the acquisition of information on costs of specific hospital services is very difficult since hospitals itemize billings in great detail for specific services and supplies and consumers are unlikely to be able, in advance, to estimate the total cost of these factors. In addition, since the physician controls entry to the hospital and the specific services to be provided, the patient may have little opportunity to control the situation once he/she has agreed to enter the hospital. Consumers, therefore, are said to engage in little price comparison activity for hospital services (Frech and Ginsburg, 1975; Newhouse, 1977). The result is that each hospital in a community will have some degree of monopoly power since consumers will generally be uninformed about alternative opportunities to purchase care at lower prices.

The nature of hospital reimbursement by third parties also is a contributing factor. Most third-party payers reimburse hospitals on the basis of costs or charges.[1] This retroactive payment mechanism has been frequently cited as a major reason for hospital cost inflation because cost increases are automatically passed on to third-party payers by hospitals. Retroactive cost-based reimbursement provides no incentives for hospitals to be efficient.

The role of the physician: Consumers are unable to purchase the type and amount of hospital services they need directly. Due to lack of medical knowledge, consumers delegate to physicians much of the decisionmaking power in the hospital market.[2] The agency relationship between patients and physicians was discussed in Chapter 2. Assuming that the physician acts as a "perfect" agent (i.e., is not influenced by considerations which affect him/herself), this delegation of responsibility might be expected to have only minimal impacts on the market for hospital services. However, most physicians, for reasons of convenience, hold admitting privileges at only a few hospitals. To attract patients, a hospital must provide services and equipment which will induce physicians to select it, rather than another hospital, for patients. This results in an emphasis on

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[1] Total costs include such items as bad debts and capital acquisitions. Commercial insurers generally reimburse hospitals on the basis of charges. Some Blue Cross plans, however, discount costs associated with bad debts and certain capital items. The federal government reimburses on the basis of "allowable costs" using a relatively complicated methodology.

[2] Consumers do have a significant degree of control at two points in this process: (1) the consumer determines when to consult a physician for a condition which may lead to hospitalization; and (2) the consumer can reject the physician's recommendation for hospitalization. Once the patient is hospitalized, little direct influence over the goods and services purchased may be retained.

"quality" of care by hospitals which attempt to attract and retain staff physicians by offering a wide variety of medical services, favorable staff ratios, and the latest, most sophisticated, medical technologies.

The presence of third-party payers in this market creates additional complications, given the physician's agency role in this market. When the physician recognizes that, for hospital services, cost is not a barrier, the maximum amount and quality of hospital care possible to the patient can be recommended, without consideration of the cost tradeoffs which would be necessary if the patient were to pay for services directly.

While the above discussion makes clear that physicians have a major role in determining the demand for hospital services, the fact that physician and hospital services are often purchased jointly creates a considerable role for the physician on the seller's side of the market as well. Therefore, the structure of the market for physicians' services may influence the degree and nature of competition among hospitals (Salkever, 1978). At a minimum, the physician, acting as a less than perfect agent for the consumer, may consider that the joint decision to hospitalize and to provide physician services to the patient has implications for the physician's revenues.

Performance of the market for hospital services: There appears to be agreement among health policy makers that the performance of the market for hospital services is poor. Reasons for this may include:

- Nonprofit nature of the industry;
- Extensive third-party payment for services with cost-reimbursement; and/or
- Physician control of decisionmaking, as a result of inadequate consumer information and consumer insensitivity to price.

Rapid increases in prices and total expenditures for hospital services have resulted in growing proportions of government budgets being devoted to hospital reimbursements. Consequently, numerous attempts to regulate the hospital industry have originated at the federal, state, and local government levels. These regulations have been designed to: (1) promote quality assurance; (2) constrain expansion of hospitals and acquisition of new technologies; (3) control utilization; and (4) contain costs. In a competitive market, it could be assumed that the interaction of buyers and sellers and prices of services would resolve these issues.

This section has briefly indicated the major characteristics which interfere with the ability of the hospital services market to function as an economic market. In the next section, a detailed examination of specific barriers to competition in the market, including regulatory actions of government, is conducted.

Barriers to competition

While much literature exists that describes the market characteristics which affect the type and degree of competition among hospitals, the empirical evidence on each issue is relatively small. In this section, the empirical evidence on barriers to competition is summarized under three major categories: (1) regulatory constraints; (2) professional control; and (3) third-party payment for services. Within each of these categories, the empirical evidence with respect to the impact of each on competition within the hospital services market is examined.

Regulatory constraints: The hospital services market is extensively regulated—more so than any other segment of the health care industry. The rationale for regulations in this market are: (1) to ensure that minimum quality standards are met; and (2) to compensate for imperfections in the market. These regulations currently include:

- Accreditation/licensure requirements;
- Utilization review/Professional Standards Review Organizations; and
- Certificate-of-need standards.

Each has implications for the competitiveness and for the performance of this market.

Accreditation/licensure requirements. Entry into the hospital industry is regulated by accreditation and licensing requirements. State licensure laws are likely to be heavily influenced by organized medicine within the state and have progressively included higher minimum standards to be applied to new entrants (Shalit, 1970). Hospital accreditation is a self-regulatory program carried out by the Joint Commission on the Accreditation of Hospitals (JCAH), which consists of members from the American Medical Association, the American Hospital Association, the American College of Surgeons, and the American College of Physicians. Hospitals are required to be accredited by JCAH to be eligible for participation in the Medicare program. In addition, unaccredited hospitals may be ineligible to receive payment under other federal, state and local programs, may be denied a Blue Cross contract, may be ineligible to participate in research and medical education programs, and may not have been able to receive funds under the Hill-Burton program (Shalit, 1970).

Thus, state licensure laws and professional accreditation programs have the potential to act as entry barriers to new hospitals. However, empirical evidence on this point is lacking.

Utilization review/professional standards review organizations. Historically, quality assurance was the primary function of most early utilization review programs. A secondary effect was the reduction of costs of hospital care through this mechanism by providing a method of monitoring unnecessary hospitalization and surgery. In 1972, federal legislation was passed (P.L. 92–603) mandating the establishment of Professional Standards Review Organizations (PSROs) with responsibility for the review of institutional and outpatient services provided under federal health programs. Hospitals not cooperating with PSROs could not obtain reimbursement services provided to Medicare and Medicaid patients. The central focus of this legislation was cost containment, with quality control a secondary goal. To the extent that physicians have power to influence patients to obtain services which are "unnecessary", the existence of PSRO utilization review mechanisms acts to limit that power and move the market for hospital services closer to the competitive ideal.

External (to the hospital) utilization review (UR) may also be offered or mandated. Second surgical opinion programs, for example, require (or allow) participants to obtain a second medical opinion on the necessity of elective surgery recommended by the initial physician. Blue Cross has required that patients' hospital stays be reviewed and approved concurrently (recertified) in an effort to reduce average length of stay.

The empirical evidence on the effectiveness of utilization review and/or PSROs is very limited. Studies of preadmission certification programs and recertification find that these forms of utilization review result in reduced admission rates and average lengths of stay (Brian, 1972, 1973). However, other studies of recertification (Blue Cross Association, 1966; State of Michigan, 1973) find that recertification programs generally had little impact on length of stay; while Dunbaugh and Neuhauser (1976) find that preadmission testing had little impact on length of stay. Sloan and Steinwald (1980) suggest that there is some evidence that utilization controls may exhibit *increased* effectiveness over time. However, they indicate that the evidence is so slight that no clear conclusions on the cost reducing effectiveness of the PSRO program can be drawn.

The effectiveness of second surgical opinion programs in limiting the extent to which physicians can generate demand for their own services has been studied recently. The chief empirical evidence on the effectiveness of second surgical opinion programs is provided by McCarthy *et al.* (1978) and suggests that second opinion programs (and, presumably, all utilization review programs) have a dual effect: (1) reduction of unnecessary utilization as a result of the program; and (2) creation of a deterrent to overprescription of surgery, as physicians adjust to the presence of the program.

The evidence that utilization review and PSROs are effective in assuring quality or containing costs is very slight. Two critical issues are evident with respect to these programs: (1) are the standards used by PSROs and UR sufficiently stringent; and (2) can the PSRO/UR process implement standards effectively? At the present time it appears that, if physicians have power to control patient's utilization of services, either they use this power appropriately or the existing programs designed to limit the market power of physicians are ineffective.

Capital expansion controls/certificate-of-need. Controls on expansion of hospital capital have taken several forms in recent years. Section 1122 of P.L. 92–603 authorized state planning agencies to review and approve hospital plans for expansion of facilities and/or services. Hospitals which went ahead with unapproved captial projects were not reimbursed by federal health programs for interest and depreciation on these projects.

Certificate-of-need (CON) controls were mandated in all states (by 1980) under P.L. 93–641. This legislation is potentially stronger than Section 1122 limits, since CON review includes the power to disapprove hospital investment. However, there is substantial variation among state CON laws which results in a wide range of effectiveness.

The primary purpose of control of capital expansion in the hospital sector is to provide a remedy for the tendency of hospitals to overinvest in costly and duplicative technology and facilities. Thus, if these programs are effective, the result would be to introduce constraints which would produce results more closely approximating investment under competitive conditions. On the other hand, CON programs may create barriers to entry into the hospital market by disapproving new hospitals or new, potentially competing, services in existing hospitals.[3]

The evidence on the effectiveness of CON and Section 1122 programs is mixed. Salkever and Bice (1976, 1979) report that CON resulted in reduced bed supply expansion, but that hospitals expanded assets per bed at the same time. Hellinger (1976) found that there was some indication that CON and Section 1122 had a negative effect on mean assets. Sloan (1981) reports findings that indicate that Section 1122 is more effective than CON, although he indicates that these results may not be reliable.

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[3] Health planning generally attempts to reduce duplication of facilities within an area in order to constrain cost increases. However, one result of this is a reduction in competition among hospitals.

The effect of CON/Section 1122 on *entry* into the hospital services market has not been studied extensively. Salkever (1977) states:

> There is reason to believe that entry barriers are particularly high for proprietary facilities. . . Recent descriptive studies. . . also indicate that state and area planning agency personnel tend to be biased against for-profit providers, so it seems probable that these providers are at a disadvantage in attempting to obtain agency approval for new facilities. This is supported by . . . statistical comparisons of investment and market share trends for proprietaries in areas with and without area planning which revealed a lesser growth of proprietaries in the presence of planning.[4]

In summary, the evidence of the effect of certificate-of-need on the hospital market is mixed:

1. CON may be effective in controlling bed supply expansion.
2. CON does not appear to be effective in restraining other types of hospital expansion.
3. CON may act as a barrier to entry for new hospitals (especially for proprietary hospitals).

These findings suggest that capital expansion regulatory programs have not acted to improve performance in the market for hospital services, to date, but instead may have decreased even further the competitive forces in this market (Feldstein, 1977).

Professional control in the hospital market: The nature and extent of monopoly power in the market affects whether and what type of competition exists. In the hospital services market, three alternatives have been suggested:

1. Local hospitals may possess a substantial degree of monopoly power.
2. The hospital professional association(s) may possess the power to influence the market.
3. The medical profession may control the hospital market as an extension of the market for physicians' services.

Little empirical research has been conducted on these topic areas explicitly. However, some evidence is available as a result of research directed at other specific topics.

Local hospital control. Within many market areas, the number of hospitals offering services is relatively small. Salkever (1978) suggests that the highly concentrated nature of much of the hospital industry may be the result of entry barriers, but that it is more frequently viewed as a result of economies of scale, in combination with the size of the local market. "The conventional wisdom is that hospitals with much fewer than 150 beds cannot economically provide a wide range of services because the necessary special services and equipment will be underused" (p. 59). In most rural areas, this minimum size standard creates a single hospital monopoly. In more urban areas, there are a greater number of hospitals, but the industry is relatively concentrated.

A second source of local hospital monopoly power is the arrangements with medical staff. Most physicians concentrate their active staff participation to only one or two hospitals. The existence of closed staff panels (i.e., only physicians on the medical staff can admit patients to a hospital) implies that any patient will have a very limited selection of hospitals, once he/she has selected a physician. Hospitals may use admitting privileges, therefore, to create more local market power. In this regard, a study by Roemer and Friedman (1971) indicates that hospitals may require that physicians with staff privileges admit a substantial proportion of the patients to the institution, if they are to retain admitting privileges.

The implications of high concentration in local hospital markets are unclear. Salkever (1977) suggests that, in extremely concentrated markets, competition will be less, as would be expected; however, this reduced competition may be desirable since hospitals compete by expanding services and adding highly sophisticated technology in order to induce physicians to seek admitting privileges and to send patients to the hospital. Studies of local market power and its impact in the hospital market suggest that there is only weak evidence that hospital concentration affects price of hospital services, revenues per day, or admissions (Davis, 1972; Watts, 1976).

While there appears to be agreement in the literature that the small number of providers in local hospital markets, combined with the existence of closed staffing arrangements, can provide local hospitals with substantial market power, there is only ambiguous evidence on the effects of this on the market.

Hospital professional associations. The national and state hospital associations represent their memberships' interests on issues that transcend local market areas. Feldstein (1977) suggests that these associations' activities are directed toward: (1) increasing demand for hospital services; (2) insuring that reimbursement methods will be designed to produce revenues which permit expansion of facilities and services; (3) acquiring government subsidies to components of hospital

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Wendling and Werner (1980) report that the likelihood of adoption of CON legislation by a state was positively associated with the degree of concentration within the hospital industry—a finding which suggests that existing hospitals may pursue CON legislation to prevent new hospitals from entering.

care; (4) limiting substitutes for hospital care; and (5) restricting additional hospitals from entering areas where there are existing member hospitals.

Demand-increasing policies of the American Hospital Association, according to Feldstein, include establishment of Blue Cross and support for government health programs such as Medicare. Reimbursement methods favored by the AHA have been those paying *service benefits*. These payment mechanisms guarantee the insured that the insurer will pay for specified services rather than a fixed amount of money. *Indemnity benefits,* which reimburse the patient a specified dollar amount, would create incentives for the patient to seek the least expensive hospital, while patients with policies providing service benefits have no such incentives. Through Blue Cross plans and other third-party payers, the AHA has encouraged development of service benefit reimbursement methods. Feldstein also stresses the role of hospital associations in limiting the entry of new suppliers of hospital services into the market. He suggests that health planning activities, and particularly certificate-of-need programs, have been the major method through which control over entry has been achieved.

Feldstein presents anecdotal evidence only of the role of hospital associations in increasing the market power of hospitals, for the most part. While it is true that third-party payment for services increases demand for hospital services, service benefit insurance reduces price competition, and health planning may create barriers to entry in the hospital market; the power of the AHA and state hospital associations to influence the development of these policies and the extent to which this power has affected the market is relatively undetermined.

Medical professional associations. Physicians' actions, individually and collectively, affect the market for physicians' services. Since patients cannot directly purchase hospital services, the physician has the central role in determining demand for hospital services; and, since physician and hospital services are produced jointly, the interaction and effects of the two services are substantially under the control of the physicians. That physicians wield much power over the market for hospital services is indicated by the structure of the Joint Commission of the Accreditation of Hospitals which includes members of the American Medical Association, American College of Physicians, and American College of Surgeons, as well as from the American Hospital Association.

It has been suggested that the nonprofit nature of the hospital industry is primarily due to physician control of the market for health services. Hospital services are perceived as complements to physician services and, thus, the physician prefers that the hospital function as a nonprofit entity in order to maximize the amount of money the patient has available to pay for physicians' services. If hospitals were profit-maximizing entities, they might compete with physicians to provide some dimensions of medical care. Pauly and Redisch (1973) suggest that the hospital is a "physicians' cooperative" where the staff physicians determine levels of labor and nonlabor inputs and the number of medical staff, consistent with the maximization of the physicians' collective money incomes.

Shalit (1970) suggests that organized medicine gains monopoly power through output collusion, which is achieved thorough control of those resources directly affecting physicians' productivity. Specifically, he states that organized medicine will raise barriers to entry in the hospital industry in order to raise the prices of medical and surgical services. He presents some evidence in support of this theory which indicates that medical care prices are negatively related to the supply of hospital beds per physician within an area.

Third-party payment for services: The effect of third-party payment for health services on the type and extent of competition in the market for health services has been discussed in Chapter 2, as well as in the first section of this chapter. The most important impact is that consumers become less concerned about price of services as the share that they pay out of pocket declines. Thus, as third-party payment for services increases, consumers are less likely to search for the least expensive provider and, consequently, the provider is enabled to gain some degree of monopoly power.

In the hospital market, the impact of third-party payment for services on the functioning of the market is especially pronounced since less than 10 percent of hospital expenditures are paid out-of-pocket. As a result, the extent of price comparison by consumers is expected to be very low. Indeed, no evidence was found in the literature that any researcher had examined the issue of consumer consideration of price and services in choice of a hospital. This may be due to the common perception that patients choose a physician who, in turn, chooses the hospital for the consumer from among those at which he/she holds admitting privileges.

Third-party reimbursement for services exerts a second impact on the market for hospital services through the method used to reimburse hospitals for services. Service benefits are typically paid by Blue Cross and Blue Shield plans. This type of reimbursement acts to insulate the consumer further from the price of hospital services, since all negotiations with respect to price are conducted between the hospital and the insurer. In addition, patients' out-of-pocket costs tend to be minimal under service benefit programs, while indemnity policies generally require greater out-of-pocket expense. Sloan and Steinwald (1981) show that while 80.9 percent of Blue Cross and Blue Shield plans offer service benefits for hospital room and board, only 30.7 percent of commercial insurers provided service benefits.

For both service benefits and indemnity insurance, hospitals are reimbursed either on the basis of retrospective "reasonable" costs or charges. Under a charge-based system, the insurer pays the hospital according to its schedule of fees for hospital services. Cost-based systems pay the hospitals on the basis of allowable costs, which usually include an allowance to cover future capital costs but may exclude other components of costs which are charged to other payers. While commercial insurers and some Blue Cross plans pay on the basis of charges, Medicare, Medicaid, and other Blue Cross plans reimburse under this cost-plus system. Critics of this latter method suggest that it actually creates an incentive for hospitals to maximize costs (Sloan and Steinwald, 1980).

In an attempt to modify the cost-increasing effects and cost-based reimbursement, a number of prospective reimbursement programs have been operated by Blue Cross plans, state governments, and others. Results of studies of these programs are mixed. The U.S. Congress (1979) finds that prospective rate setting reduced the annual growth in hospital costs by 1 to 3 percent. Biles, *et al.* (1980) document lower rates of cost inflation in states with legislative rate-setting. Sloan and Steinwald (1980), however, obtain mixed results from which no clear conclusions may be drawn. Sloan (1981), using post–1975 data, examines the same issues and finds that prospective rate review did have an impact on costs. Coelen and Sullivan (1981), similarly, find that mandatory programs appear to be associated with reductions in the magnitude of cost increases.

In summary, third-party payment for services affects the nature of the market for hospital services through two mechanisms:

1. The nearly comprehensive third-party coverage for hospital services causes consumers to be insensitive to price differentials among hospitals.
2. The third-party reimbursement methods most commonly used do not create incentives for hospitals to control costs.

As a result of these and other factors, the market for hospital services bears little resemblance to a properly functioning competitive market in its conduct or its performance.

Summary: There is a substantial number of barriers to competition in the hospital services market. These include:

- The nonprofit nature of the industry;
- Barriers to entry, including licensure, accreditation, and health planning provisions;
- The inability of consumers to choose hospital services directly as a result of inadequate knowledge and institutional barriers; and
- Extensive third-party payment for hospital services and reimbursement policies that create cost-increasing incentives.

Within this market, competitive forces may still operate, but given the substantial imperfections in the market for hospital services, it is not reasonable to assume that the functioning of this market, at the present time, closely resembles the competitive ideal.

Price competition

The above discussion on barriers to competition in this market suggests that there may be only minimal price competition in the market for hospital services. In this section, the evidence on the existence and the impact of price competition is discussed. Three related types of issues are considered:

1. The evidence of price competition between proprietary and nonprofit hospitals;
2. The evidence of cross-subsidization among services and categories of hosital patients; and
3. The evidence on price competition between hospitals and alternative delivery modes.

Nonprofit versus proprietary hospitals: Although proprietary hospitals constituted only a small proportion of short-term hospitals in 1979, they are the major competition facing nonprofit hospitals. The for-profit hospital has goals that differ from those of the nonprofit hospital: it chooses to maximize profits to be paid out as dividends to its stockholders. Nonprofits, on the other hand, may wish to maximize excess revenues in order to expand facilities and services or may have other objectives which are not related to profit maximization.

Nonprofit hospitals are concerned about the possibility of price competition by proprietary hospitals. The argument has been made that for-profits engage in "cream-skimming" (i.e., accepting only patients that are relatively inexpensive to treat) and, thus, lure away those patients that produce the greatest excess revenues (Salkever, 1978). Bays (1977) examined the case-mix of for-profit and nonprofit hospitals and found that, indeed, the available data on case-mix and on complexity was consistent with the cream-skimming hypothesis. He concludes:

> . . . concern over the existence and extent of cream-skimming is misplaced. The interesting theoretical and policy questions are, respectively, why is the pricing structure of nonprofits such that for-profits find it profitable to produce only certain types of care, and what would be the relative impact on prices, quantity, and quality of hospital care from either prohibiting or encouraging such behavior by the for-profit sector (p. 21).

There seems to be some evidence that for-profit hospitals may produce services more efficiently than do nonprofits. However, Bays (1979) and Stevenson (1976) point out that single for-profits and chain-operated for-profits are very different in their characteristics. Bays compares costs of for-profit and nonprofit hospitals in California and concludes that for-profits are significantly less expensive than nonprofits, even after adjustments for case-mix have been made. In addition, he finds that chain for-profits have a case-mix that is similar to that of nonprofits but are less costly than both nonprofits and nonchain for-profits.

Sloan and Steinwald (1981) report that proprietary hospitals have lower labor costs, but higher total expense per patient-day than do nonprofits. Similar results were obtained when the authors examined the demand for inputs by hospitals: for-profits tend to employ significantly lower levels of inputs than do nonprofits. Anecdotal evidence by Eamer (1971) and by Johnson (1971) tends to support the empirical evidence reported by Bays and by Sloan and Steinwald: for-profits use fewer labor inputs than do nonprofits. Johnson (1971) argues that this phenomena is a result of differences in services provided and/or in the quality of care. Eamer, on the other hand, suggests that the introduction of modern management techniques is responsible for some portion of the savings. In addition, he raises the point that nonprofit hospitals may engage in cross-subsidization among departments (i.e., take losses in one department which are offset by profits in others, in order to continue offering the services which are losing money), while for-profits would be inclined to price services on the basis of actual costs.

Cross-subsidization: Cross-subsidization among departments within hospitals also has implications for price competition in the market for hospital services. Harris (1979) examines this issue and suggests that cross-subsidization of hospital departments may represent a form of price competition in the market for hospital services. For example, hospitals may have acquired specialized diagnostic equipment which is extremely expensive to use; regulatory agencies may pressure the hospital to demonstrate that sufficient demand for this equipment exists to justify its presence. If the hospital subsidizes the procedure, the reduced price may be sufficient to generate enough demand for the service and, therefore, to justify the hospital's acquisition. Another possibility suggested by Harris is that the hospital may be under competitive pressures to make special price discounts for patients admitted by a hospital's more prestigious surgeons. This type of price competition may exist in the market, but is difficult to quantify. To date, no empirical evidence is available.

Cross-subsidization among patients has been discussed as having an impact on the performance of the market. It is of particular concern that reimbursement for care provided to Medicare and Medicaid patients is generally based upon "allowable" costs incurred and does not cover the full charges for care. Similarly, some Blue Cross plans reimburse hospitals on the basis of less than full charges. When public program patients and some Blue Cross insured patients result in revenue to hospitals below the full charge for services provided, hospitals may be presumed to recover these losses by charging other patients at a level above the actual costs incurred by those patients. It has been estimated that the cross-subsidization from private sector to Medicare and Medicaid patients was as high as $3,000,000,000 in 1979 (HIAA, 1981).

Monheit and Hornbrook (1982) examine the issue of discriminatory pricing behavior by the hospital sector to subsidize the care of publically insured patients. Using data from the Hospital Cost and Utilization Project of the National Center for Health Services Research, they examine the variation in the degree of cross-subsidization between private and public payers by hospitals with different characteristics which are expected to be related to charge and cost structures. In addition, they focus on the effect of the share of hospital utilization by cost-based payers on the extent of cross-subsidization. Preliminary results reported by Monheit and Hornbrook suggest that the share of hospital utilization accounted for by Medicare patients has a strong and positive effect on the hospital level of accounting cross-subsidy. However, the share of utilization accounted for by cost-based Blue Cross plans is negatively associated with the level of cross-subsidization. It is suggested that this result may be due to attempts by the hospital to increase expenses in this case, rather than to cross-subsidize, since Blue Cross reimburses on this basis. The authors stress that these findings are "very preliminary," however, and it is possible that these conclusions may change as further refinement and interpretation of the model occurs. The implications of cross-subsidization among classes of patients seems clear. If public patients and some Blue Cross-insured patients face lower prices for hospital services, the amount of hospital care demanded by these categories of patients might be expected to be higher than demanded by nonsubsidized patients. However, for most hospital services, consumer cost-sharing is relatively low, so the effect of cross-subsidization on demand may be small. A more substantial impact of cross-subsidization may occur in the market for health insurance, since privately insured consumers will face higher health insurance premiums which reflect the expected cross-subsidy to cover hospitals' losses from public patients, to the extent these exist.

Hospitals versus alternative settings: Finally, price competition may exist between hospitals and alternative settings which provide selected services. Free-standing outpatient surgical facilities have been developed in recent years which cut the costs of surgery by eliminating the necessity for overnight hospitalizations. Anecdotal evidence suggests that these outpatient surgical facilities are quite successful as a method for cost reduction (Thurlow, 1970). Hospitals may compete with free-standing, ambulatory and surgical centers by developing hospital-based outpatient and surgical centers (Friedman et.al., 1981). The pressure to do so may be substantial since the patients most suitable for outpatient surgery are those who are relatively inexpensive to treat and from whom the hospital is most likely to gain excess revenues. The AHA Board of Trustees in 1973 stated that overnight hospitalization is not essential for many types of minor surgery and, therefore, recommended that outpatient surgical facilities be provided within the hospital. However, the AHA was opposed to free-standing outpatient surgical centers on the grounds that these institutions would not be equipped to handle emergency situations (P. Feldstein, 1977).

Summary: The limited amount of research conducted on the nature and extent of price competition in the hospital services market is consistent with the evidence that: (1) substantial barriers to competition exist in this market; and (2) while some price competition is present in this market, consumer price sensitivity is not a strong market force. Competition does exist—but price may not serve a market-clearing function in the hospital market to the same extent that it does in other markets.

Nonprice competition

In markets with an absence of price competition, other competitive factors typically emerge as the primary motivational force in the market. The nonprofit nature of the hospital industry and the existence of extensive third-party payment for services causes substantial price insensitivity in this market. In Chapter 2, and in the introduction to this chapter, the objectives of hospitals were discussed: quantity of patients; quality of care; prestige; capital and facility expansion; and income maximization of staff physicians. The implications of these objectives, within the structure of this market, are that: (1) hospitals compete for patients; and (2) hospitals compete for staff.

Direct evidence on nonprice competition among hospitals is not abundant. Lee (1963) examines the theory that hospitals are interested in maximizing prestige, in order to attract both physicians and patients, using factors associated with prestige as indicators: (1) rapid increases in the use of inputs per unit of output; (2) rapid growth of corporate hospital chains (to take advantage of inefficiencies in the nonprofit sector); and (3) evidence of "conspicuous production" with respect to open heart surgery.

Joskow (1980) examines nonprice competition among hospitals, hypothesizing that interhospital competition will tend to increase the supply of beds since one measure of quality that may attract physician staff is the probability that beds will be available when the physician is ready to admit a patient. Joskow also hypothesizes that the more intense nonprice competition is within an area, the greater will be the scope and quality of services available. Excess bed supply is an important factor in competitive markets in order to: (1) reduce admission delay; and (2) provide higher quality care.[5]

Joskow's empirical work supports these hypotheses. The findings are consistent with the assumption that interhospital competition induces hospitals to expand bed supply. Joskow suggests that higher market concentration reduces quality competition and results in lower reserve margins (i.e., excess beds). He puts forth the conjecture that, "In a system where price competition does not play an important role, policies designed to facilitate entry and to promote competition among hospitals may have undesirable efficiency properties as competitive forces lead to uneconomic expansions of the quantity and quality of care supplied" (p. 446).

Salkever (1978) similarly suggests that, "One might plausibly argue that in extremely concentrated markets, served by only one or two hospitals, pressures for higher costs and prices are not as great because of the absence of nonprice competition" (p. 64). He cites as supporting evidence the conclusion reached by Kaitz, after studying a small number of hospitals in Massachusetts, that the noncompeting rural hospital is in a strong position vis-a-vis the physician; when the physician has no other hospital to which to admit patients, the hospital board can more objectively determine the necessary hospital resources.

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[5] Harris (1979) suggests that the overall quality of care is better when the hospital operates below capacity.

Despite the fact that there seems to be a fair amount of agreement in the economic literature that nonprice competition exists among hospitals, the empirical evidence is scarce, due to an absence of adequate data. However, Joskow's suggestion that expanding nonprice competition may lead to worse inefficiencies in the market, deserves further consideration in light of current proposals to increase the degree of competition in the hospital market.

Summary

The market for hospital services exhibits a number of characteristics which present substantial barriers to its ability to function as an economic market:

- The nonprofit nature of the industry, which leads hospitals to maximize quantity and quality of output rather than profits;
- The inability of consumers to demand hospital services directly, due to ignorance and institutional barriers;
- The extensive presence of third-party payment for services, resulting in price insensitivity of consumers and, due to the methods of reimbursement most commonly used, incentives for hospitals to maximize costs; and
- Barriers to entry, including licensure, accreditation, certificate-of-need, and other health planning reuirements.

Given these imperfections in the market, it is not surprising that the performance of the market for hospital services is poor. Inflation, excess capacity, and overinvestment in technology characterize this market.

Some forms of cooperation do exist, however. For-profit hospitals, especially chain-operated, have been expanding in recent years. Similarly, alternative providers of selected hospital services (e.g., outpatient surgical centers) have emerged in recent years to offer services at a lower price than hospitals. However, there is some limited evidence that noprofit hospitals may use cross-subsidization of services internally to permit more competitive pricing for those services that are likely to attract staff and physicians.

Nonprice competition also appears to exist in this market. Hospitals compete for staff physicians and patients by offering a multitude of services, sophisticated equipment, and short delays for admission. This nonprice competition, however, may well contribute to substantial inneficiencies and rapidly rising costs in the market for hospital services.

Evidence on competition in the market for physicians' services

Overview of the market

It has been suggested that the founding of the American Medical Association (AMA) in 1847 marked the beginning of the decline in competition in the market for physicians' services, (Kessel, 1958; P. Feldstein, 1977). From 1847 to the turn of the century, the AMA concentrated on promoting the concept of licensure before state legislatures, arguing that such procedures were necessary to assure quality of care to patients. The organization was generally successful in inducing states to set up state licensing boards to administer qualifying examinations and grant licenses. Thus, licensure requirements were the first legal restraints put on the practice of medicine.

In 1910, the Carnegie Foundation repeated the AMA's earlier inspection and grading of medical schools, and issued a report arguing that a substantial proportion of medical schools should be closed due to the low standards of training offered. As a result, the number of students enrolled in the medical schools declined from 28,000 to 15,000 between 1904 and 1915. The number of physicians per capita correspondingly dropped from 146 in 1910 to 125 in 1929. Kessel argues that these results indicate that federal and state authorities delegated to the AMA the power to regulate the medical industry in the public interest:

> . . . It is this power that has been given to the AMA that is the cornerstone of the monopoly power that has been imputed by economists to organized medicine (Kessel, 1958, p.29).

However, as current writers in the field are quick to point out, the physician services' market has undergone significant changes in the years since Kessel wrote his classic article. Since 1965, the number of medical students and the per capita supply of physicians has increased substantially. In addition, there has been a rapid expansion in private and public insurance coverage for physicians' services: the population enrolled under private insurance plans which cover major medical expenses has risen from less than 1 percent in 1950 to 61 percent in 1979, while the growth of public financing of physician expenditures has gone from $0.1 billion in 1950 (5 percent) to $10.7 billion in 1979 (27 percent), with most of this growth attributable to the Medicare and Medicaid programs (Gibson and Waldo, 1981). A third factor which has affected the market for physicians' services is the shift of health insurers from an indemnity method of reimbursement—paying a fixed dollar amount for a particular service—to a "usual customary and reasonable" (UCR) fee structure. This method typically reimburses a physician for a certain percentage of the average fee for a particular treatment in a given local area. Such a payment obviously allows physicians to set their own fee, up to a maximum, over time.

The question, therefore, which must be addressed is: to what extent do Kessel's conclusions with regard to the monopolistic nature of the physicians' market still hold true? More simply, "Is the present market for physicians' services monopolistic or competitive?" One caveat to be mentioned at the outset, which is based on the discussion in this section, is that the choice is not between perfect competition and monopoly in the market for health services. It is unrealistic to assume that the physicians' market will conform to all of the assumptions of either the perfectly competitive or pure monopoly models. Rather, the task is to examine the existing competitive elements in order to provide a foundation upon which policies to improve and strengthen competition in this market could be constructed.

In the following sections, evidence on barriers to competition will be described, including legal restraints, professional control, consumer information limitations, the role of private insurance, and public sector policies. Then evidence on the extent of price competition among physicians, and between physicians and alternative providers, will be presented. The evidence on the role of nonprice competition within this market will also be evaluated. Finally, findings from the existing research will be summarized with respect to conclusions regarding the competitiveness of the market, and to identify gaps in available research which hinder the formation of policy addressed to problems in this market.

Barriers to competition

The market for physicians' services doesn't operate under conditions of perfect competition. In fact, there are numerous barriers to competition in this market, as in other health services markets, which affect the type and extent of competition possible and, consequently, the performance of the market. In this section, the nature of barriers to competition in the market for physicians' services and implications for market performance are described. Four categories of potential barriers to competition are described:

- Legal restraints;
- Physician control;
- Inadequate consumer information; and
- Public policies.

Legal restraints: Licensing laws, implemented during the latter half of the nineteenth century, and more recently enacted legal restraints including health planning laws, medical practice acts, and "freedom of choice" statutes have had an impact on entry into medical practice. Although these legal restraints have been promoted as a means of maintaining and increasing professional quality, most researchers suggest that they restrict the supply of physicians' services, directly as a consequence of barriers to obtaining a medical credential, or indirectly, through a reduction in the availability of potential substitutes (P. Feldstein, 1977; Kessel, 1970; Kissam, 1981).

Medical licensure acts to restrict the supply of practitioners in a number of ways. First, state medical associations, through licensing boards appointed by the governor, influence professional qualification standards and develop and administer the necessary examinations. In order to be licensed, a U.S.-trained physician must attend a medical school approved by the AMA and the American Association of Medical Colleges, participate in an AMA-approved hospital internship program, and pass a written examination. Since these licensing boards generally are composed of medical practitioners, the result is that the profession is regulating itself (Stigler, 1971). This fact creates an obvious conflict of interest concerns (Cohen, 1980). Second, there are restrictions placed on those physicians who graduate from foreign medical schools who wish to practice in the U.S. Additional training requirements, U.S. citizenship, lengthy state residency requirements, nonreciprocity or limited reciprocity of licensure among states, are methods which have been used to reduce the ease with which foreign medical graduates may enter and work in the U.S. (Frech, 1974). Licensure also has been used as a means for: (1) restricting the use of ancillary personnel as substitutes to perform certain physician functions; and (2) inhibiting the development of group practice arrangements, which use such auxiliaries to achieve greater efficiencies in practice (Roemer, 1971).

On the other hand, there are economists who argue that licensure is a response to consumers' desires for the establishment of minimum quality standards (Leffler, 1978). Two rationales are found in the literature to support such a public interest argument: (1) licensure is claimed as an efficient response to the difficulty that consumers have in obtaining information on physician quality (Klarman, 1965); and (2) a minimum quality standard may prevent consumers from choosing to receive services from providers who are not capable of offering beneficial services and/or who may actuality *harm* the patient (Leffler, 1978).

If the supply of physicians has been restricted due to licensure provisions, the economic effects would be: (1) to increase prices; (2) to raise the rate of return to a medical education Sloan, 1970; Mennemeyer, 1978); (3) to reduce competition within the profession (Frech, 1974); (4) to increase the supply of substitutes (P. Feldstein, 1977); and (5) to encourage price discrimination on the part of physicians (Kessel, 1958; P. Feldstein, 1979). Empirical evidence on these points produces mixed results. The rates of return to medical education, assumed to be a gauge of monopolization within the industry, have generally been calculated to be above average, about 22 percent in 1970 (Feldman and Scheffler, 1978), or an equivalent to an annual $4,000 annuity over a 47 year period (Dresch, 1980). Criticisms of such calculations are made on the basis that they contain an upward bias because they fail to adjust these rates for the fact that physicians work, on average, more hours per week than other professions (Lindsay, 1973; Sloan, 1976; Leffler, 1978; Langwell, 1980). The number of allied health workers per physician has been rising steadily, providing support for the expectation that the number of physician complements would increase. In addition, the number of medical personnel in direct competition with physicians has increased greatly; for example, the supply of chiropractors increased by 147 percent between 1940 and 1960, while the supply of physicians increased only 47 percent (Frech, 1974).

For the most part, the legal restraints reviewed here create barriers to the free functioning of the market. The impact of these laws in assuring minimum quality standards may justify such outcomes. However, even those who advocate a public interest rationale for the existence of medical practice restraints agree that other alternatives (e.g., certification) do exist which might impose less onerous anticompetitive impacts on the market for physicians' services.

Physician control: In addition to legal restraints on competition in the market for physicians' services, it has also been suggested that physicians directly influence the market for their services through the actions of professional associations. These actions include: (1) restricting medical school admissions and determining the characteristics of those admitted (Kessel, 1958; Frech, 1974); (2) limiting hospital privileges (Kessel, 1970; Shalit, 1977); (3) fixing physician fees through the use of relative value scales (Havighurst and Kissam, 1979); (4) affecting third party reimbursement through membership on the boards of Blue Shield plans (Kass and Pautler, 1979, 1980, 1981); and (5) developing and controlling individual practice associations (IPAs) (Havighurst and Hackbarth, 1981). Again, empirical evidence appears to be mixed on each of these charges.

In 1942, the Liaison Committee on Medical Education (LCME) was formed, jointly by the AMA's Council on Medical Education and the Association of American Medical Colleges, to handle medical school accreditation matters. During the period 1945 to 1965, medical school enrollments grew but not as rapidly as population growth. However, in the last decade, enrollments have expanded rapidly, with increasing percentages of women and minorities being admitted into medical schools. Competition in the market may be enhanced by the presence of physicians who offer different preferences for practice patterns. Some evidence exists that minorities and women may practice more frequently in salaried settings and establish practice patterns which differ from the norm of the profession (Kehrer, 1976; Langwell, 1980; Langwell, 1982).

The literature on the impact of physician control on hospital privileges offers little empirical evidence. The antitrust literature suggests that hospital privileges originated as a mechanism to assure high quality medical staff. On the other hand, this literature also views hospital privileges as an anticompetitive mechanism which restricts both inter- and intraprofessional access to hospital facilities. By limiting privileges to certain subsets of "competent" practitioners, a hospital may be able to differentiate itself better from other similar facilities. However, limiting hospital privileges often means that patients are denied their choice of physicians and are unable to obtain services from competing nonphysician providers. Restrictions on competition among physicians result. In addition, consumers often are unable to receive hospital services from potentially competing providers such as certified nurse midwives, podiatrists, clinical psychologists, osteopaths, and other nonphysician groups (Pollard and Leibenluft, 1981). If only physicians are permitted to provide services in a hospital setting, a substantial barrier to competition by nonphysician medical providers exist. There appears to be a general consensus that the interdependent relationship between a hospital and its medical staff will become increasingly uneasy as nonphysician providers seek access to hospitals, and as the supply of physicians grows (Davis, 1981).

The ability of organized medicine to control the prices of services provided by individual physicians is a critical issue which has been addressed by researchers to a limited degree. One mechanism through which such control could be exerted is the development of professional association-sponsored relative value scales. A relative-value scale is described as a list of discrete medical services in which each service is given an index weight expressing a proportional relationship between that item and all other items on the list. Such scales can be made into a price schedule by multiplying the index value given to each medical service by some standard conversion factor (Havighurst and Kissam, 1979). The proponents of relative-value scales argue that such information exchanges may lead to greater efficiency in markets where there is no predisposition to collude. These proponents have found that relative value scales have no significant positive effects on reimbursement levels; rather, fee levels are more influenced by variables reflecting supply and demand factors than institutional factors such as fee schedules (Eisenberg, 1980).

Opponents of relative-value scales counter that relative-value studies threaten to eliminate competition among third-party payers as well as physicians. Specifically, they are seen as encouraging price-fixing behavior among physician groups, promoting physician manipulations of the insurance system through expansions of comprehensive medical insurance, and suppressing third-party cost containment initiatives. For these reasons, it is advocated that professionally-sponsored relative-value studies be treated under the antitrust law like other trade association pricing formulas which have been held unlawful *per se* (Havighurst and Kissam, 1979).

The evidence on the effect of professional association-sponsored relative-value scales on the nature and extent of competition in this market is insufficient to warrant a conclusion. However, since the promulgation of relative-value scales by physician associations has been restrained under federal anti-trust actions, it appears unlikely that organized medicine will be able to influence prices of members in a direct or overt manner in the future.

Another form of physician control is the potential "influence" that organized groups of physicians, as well as individual physicians, may be able to exert over the operations of third-party payers. Studies of this issue have concentrated on physician influence on the boards of Blue Shield (Kass and Pautler, 1979; Sloan, 1981; Lynk, 1981). Proponents of reducing physician participation (the Federal Trade Commission, among others) argue that higher reimbursement levels for physicians' services are associated with greater representation by organized medicine on the Blue Shield boards. A detailed discussion of the empirical literature on this subject is presented in Chapter 6.

Most recently, concern about physician control of the market for physicians' services has focused on the development of individual practice associations (IPAs) by medical societies or other physician groups. IPAs are organizations of physicians which contract directly or indirectly with consumers to provide services in return for a fixed premium. Thus, IPAs are a form of HMO which is in direct competition with the traditional fee-for-service system. Although IPAs can be organized by anyone, Havighurst and Hackbarth (1982) indicate that they have been most often created by local medical societies. This domination of IPA control by organized medicine is perceived by Havighurst and Hackbarth (1982) to be anticompetitive in nature, although they acknowledge that the organization of an IPA may lead to lower costs of care. Professional control of a prepayment plan implies that organizaed medicine holds some degree of influence over prices, over the form and conditions of payment, and can affect the nature and extent of competition in the local market. Havighurst and Hackbarth offer no evidence that medical society-sponsored IPAs do affect competitive conditions in the market. Nevertheless, they advocate that medical societies be legally prohibited from organizing or controlling IPAs.

Inadequate consumer information: The competitiveness of the physicians' services market is also affected by the degree to which consumers can obtain information and the difficulty in acquiring information. High information costs result from advertising restrictions and other barriers to information. It has been suggested that information conveys monopoly power to the individual physician. Higher prices can be charged by the physician without a loss of clientele since the costs to the patients of evaluating other alternatives are high (Cantwell, 1981). Pauly and Satterthwaite (1981) find that consumers search more effectively in areas where there are relatively few physicians (i.e., where search costs are lower).

There also is an incentive for the patient to delegate to a physician the responsibility to determine his/her treatment mode given the nature and complexity of medical knowledge (Weisbrod, 1978). In addition, the presence of substantial insurance coverage for physicians services reduces the incentives for patients to search for information. The theory that the physician creates demand for medical care, acting in a self-interested manner, is referred to as the "supplier-induced demand" hypothesis (Evans, 1974; Sloan and Feldman, 1978).

As described earlier, one of the major assumptions for a competitive market is that consumers possess information sufficient to make educated choices among alternative services available to them. The lack of consumer information in the market for health services and the implications for market performance have been discussed in Chapter 2. The fact that the physician usually prescribes a patient's treatment mode does not in itself affect conventional supply and demand analysis. However, proponents of "supplier-induced demand" cite empirical evidence to support their contention that a physician will generally tend to recommend his/her own services, rather than those of substitutes. This may result in the patient's choices being biased toward those services that will yield the highest net revenue for the physician (Evans, 1974). If this theory held, in its strongest form, conventional supply and demand analysis would not be applicable to the market for physicians' services.

There has been a great deal written on both sides of the question that addresses this issue. Limited empirical support for this concept is found in the following relationships:

1. Physicians' fees are higher in areas where the relative supply of physicians is greater (Fuchs, 1978; Evans, 1974; Evans, *et al.*, 1973).

2. Per capita utilization of physicians' services frequently are found to be higher in areas where the supply of physicians is greater[1] (Fuchs and Kramer, 1972; Davis and Reynolds, 1976; Newhouse and Phelps, 1976).

3. During the Economic Stabilization Program in California, when physicians' fees were controlled, services to Medicare patients increased (Hadley *et al.*, 1979).

4. Patients are more likely to report physician-initiated visits in areas where the physician-to-population ratio is higher, although this effect is small (Wilensky and Rossiter, 1981).

On the other side, others such as Sloan and Feldman (1978) have reviewed this literature and the existing evidence and find it weak at best. They argue that an increase in the physician-to-population ratio with rising fees does not provide a *per se* basis for concluding that physicians create demand or achieve income-targets. They argue that the relationship may well be due to the fact that individuals are willing to pay more for higher quality services through reduced waiting and travel times and more patient contact. Conversely, however, current evidence does not allow one to rule out such theories. Auster and Oaxaca (1981) conclude that empirical testing of a supplier-induced demand effect may not be feasible with the type of data which are usually available. Such tests require that wages vary a great deal across metropolitan areas. The authors find that the available data exhibit insufficient variability to allow such testing.

Unlike the "supplier-induced demand" hypothesis, the existence of advertising restraints among physicians is universally agreed to have an impact on the market. The question which arises in the literature is whether advertising has a positive or negative effect on prices. Controls on advertising in the market for physicians services are defended on the grounds that such restraints are necessary to prevent "quacks" and other unscrupulous providers from misleading patients. Others argue that stringent controls on advertising decrease competition and result in higher prices.

No empirical research has focused on such advertising restraints in the physician market, although studies have been done related to optometric examinations, eyeglasses, and prescription drugs. Variations in prices were examined across states to see whether states with stringent advertising controls had higher prices than those with less stringent controls. Studies of eyeglass prices suggest prices of eyeglasses were lower in states without advertising bans; however, quality factors were not investigated (Benham, 1972; Benham and Benham, 1975). Similar results were found in the case of optometric examinations but, in this case, qualitative factors such as length of examination, and types of office procedures and equipment, were held constant. Bans on optometrist and optician advertising are found to cause the eye examination fee to be 16 percent higher than in states without such controls (Feldman and Begun, 1978). An analysis of prescription drug prices in states with and without restrictions on advertising yields similar results (Cady, 1976).

Price competition

Much research on the physicians' services market has focused on the conduct of the market, rather than on its structure, as a means of determining the extent to which monopoly exists. Two types of pricing behavior are of primary interest: (1) the extent to which there is price competition among physicians; and (2) the extent to which there is price competition between physicians and providers who offer substitute services.

Examination of fee dispersion within a geographic area has been one approach to evaluating the extent of price competition within that area. The interpretation of the findings of these studies may vary. However, in a competitive market, with many buyers and sellers, it is assumed that little price dispersion would be observed, since buyers who are adequately informed would search for the seller who offers the service at the lowest price. Thus, competitive pressure would be exerted on physicians with higher prices to reduce those prices in order to attract a share of the market. Low price dispersion, then, has been interpreted as indicating the existence of a competitive market (Newhouse and Sloan, 1972; Hsiao, 1980; Cantwell, 1981; and others). At the same time, however, in a competitive market, sellers are responsive to consumers' preferences and produce goods and services which vary with respect to quality and other characteristics. A variety of prices for a specific good or services may then be observed, reflecting these varying characteristics which are associated with the product. Studies of the characteristics of a physician's office visit indicate that there are substantial differences in mean length of visit, waiting time, travel time, and other characteristics (Sloan, 1978; Guterman *et al.*, 1980; Langwell, 1982; and others). Therefore, given the heterogeneity of services offered within the physician services' market, it is to be expected that considerable fee variation will be observed within a community. The critical question to be addressed by research is: to what extent is there price dispersion, within local markets, that cannot be accounted for by variations in the characteristics or quality of the physician services offered?

Several studies attempt to measure variations in physician fees within a local market area. The dispersion of prices for physician services in New York and Chicago is found to be substantially higher than the dispersion of prices for new Chevrolets in Chicago, or for bids to the federal government for the delivery of anthracite coal (Newhouse and Sloan, 1972). A similar degree of price dispersion is found for a much larger number of communities, using various national surveys of physicians conducted by Mathematica, the Health Care Financing Administration, and the American Medical Association (Sloan, 1979; Guterman *et al.*, 1980; Cantwell, 1981). A study by Hsiao (1980) examines patterns of physicians' fees. Hsiao finds that fees vary widely within a community for a given procedure, with the range greater for medical procedures than surgical ones. In most states, actual fees were not consistent with established relative-value scales. These findings suggest that: (1) relative-value scales are not derived from actual market prices; and (2) if organized medicine is attempting to fix prices through such a mechanism, it has not been effective at doing so. Findings of these studies do suggest that product differences among physicians cannot fully account for the observed dispersion in fees. It may be concluded that physicians do have substantial discretionary power over the fees they charge, and that prices are not determined on a purely competitive basis (Sloan, 1979).

The nature and degree of price competition between physicians and alternative providers (e.g., psychologists, optometrists) has received little attention by researchers. Those studies which exist address the extent to which alternative delivery systems, such as HMOs, have forced fee-for-service physicians to alter their fee structures (Goldberg and Greenberg, 1979, 1981). The fact that organized medicine has consistently attempted to place restrictions on other professions which provide services which may substitute for some physician services, suggests that price competition between physicians and these other professions exists. Rather than compete purely on the basis of price, however, organized medicine frequently has attempted to gain control over the competing profession (e.g., nurse-midwives) or has succeeded in erecting barriers to competition for those professions (e.g., psychologists are not able to obtain hospital admitting privileges) (Feldstein, 1977).

Nonprice competition

There is only extremely limited evidence that suggests that price competition is a major factor in the market for physicians' sevices. Restrictions on advertising and other conditions which affect the ability of consumers to obtain price information in this market, may account for the low level of price competition observed. In the absence of price competition, it is frequently the case that nonprice competition may become the major factor in markets. It has been argued that the physicians' services market exhibits substantial nonmonetary competition (Acton, 1975,1976; Sloan and Lorant, 1976, 1977; Sloan, 1978, 1976; Guterman *et al.*, 1980).

Elements of nonprice competition in the physician services market include such factors as: (1) patient waiting times; (2) travel time; (3) length of visit; and (4) convenience of hours, among others. Acton (1975, 1975) conducted two early studies of the effect of time considerations on the market for physicians' services. He finds that the expected amount of time waiting in the office after arrival for an appointment influences patients' choice of setting. Those individuals who prefer shorter waiting times choose private practice physicians, rather than utilizing outpatient clinics of hospitals. Acton also finds that travel time to a provider's office has greater implications for consumer choice of provider than does office waiting time.

Sloan and Lorant (1976, 1977), examine the effects of length-of-visit and waiting times. Longer visits and shorter office waiting times are desirable characteristics of physician visits, given a constant price per unit of services. They also find a negative relationship between physician-to-population ratios and waiting times. This suggests that, as competition among physicians within a geographic area increases, physicians respond, in part, by offering nonmonetary benefits to attract patients.

Sloan (1978) analyzes patterns of patient choice of provider settings, including private offices, outpatient clinics, and hospital emergency rooms, by employed persons and non-employed women. He finds that, other things equal, consumers prefer to visit private office-based physicians, and that emergency room use appears to be limited primarily to actual emergency care and to hours when neither private physicians nor outpatient clinics are ordinarily available to provide services.

The role of nonmonetary factors appears to be important in the market for physicians services. As the out-of-pocket price of these services declines due to expansion of third party payment, it can be expected that nonmonetary factors will become even more important. Similarly, as advertising of services grows more common, physicians may be expected to compete for patients on the bases of both price and non-price factors.

Summary

In summary, it is clear that the available literature has been unable to provide a complete answer to the question of the degree of competitiveness in the physician services market. Barriers to the competition in the market do exist, since the market does have characteristics which violate the standard competitive model. Some degree of consumer ignorance and product heterogeneity are present. In addition, there are legal barriers to entry (e.g., licensing) and professional barriers (e.g., hospital privileges, advertising, medical school admissions and accredition, and the composition of the boards of Blue Shield) which could be altered by public policies.

Arguments in favor of many of the existing restraints of competition usually are based on the need to maintain a minimum level of quality. Others argue that lowering such barriers might increase quality and enhance consumer choice (Havighurst, 1977; Enthoven, 1978). The available literature has not been very successful in sorting out the validity of these positions. Consequently, attempts to increase competition in the market for physicians' services may yield positive results, but little existing evidence may be of use in determining the potential for change in this market.

Evidence on competition in the market for dental services

Overview of the market

Although an analysis of the market for dental services is often based on an assumption that it is very similar to the physicians' services market, this market possesses some distinct characteristics which lead to differences between these markets:

1. In the mid–1970s, only 12 percent of the population had dental insurance coverage—by 1979, nearly one-third of the U.S. population had some dental expense insurance (HIAA, 1981).
2. Because of the lack of third party coverage, patients' expenditures for dental care are significantly more responsive to price and income changes than medical care expenditures.
3. In the public sector, there is minimal coverage for dental services—Medicare has almost none; some low income persons are covered under Medicaid state options.
4. There has been a growing emphasis on preventive care, not only in individual dentists' practices, but also through state and national organizations supporting such programs as water supply fluoridation.

Dental expenditures as a percentage of total health care expenditures have declined over the last 20 years, from 8.4 percent in 1955 to 6.3 percent in 1975. One obvious explanation for this decline is the fact that dental fees have risen less rapidly than other medical care prices. The lower inflation rate in the market for dental services has been attributed to increased dental productivity through the use of dental auxiliaries, technological advances, changes in treatment emphasis, and organizational improvements (Griffiths, 1978).

Although these characteristics distinguish the market for dental services from the market for physicians' services, there are also similarities between the two professions:

- Almost all dental care remains on a fee-for-service basis. The majority of dentists practiced alone (71.1 percent) in 1977 (American Dental Association, 1978), although the number of dentists involved in group practices is rising (Schoen, 1980).
- Legal restraints on dental practice do exist, since all states license dentists. Medical practice acts restrict auxiliary dental personnel from performing certain dental treatments. In fact, interstate mobility is more limited among dentists than among physicians due to restrictions on state reciprocity of licensure.
- As has been the case for physicians, the dentist-to-population ratio has been rising rapidly. In the past decade the number of dentists increased by 31 percent, while the U.S. population grew by only 10 percent.
- Although third-party coverage remains lower for dental care than physician care, coverage for these services is rapidly increasing.
- There may be inadequate consumer information in the market; this lack is becoming more severe as technological advances have altered the emphasis of dental treatment away from removal of teeth and denture preparation and toward increased restorative work.
- Professional controls exist within the dental services market, as in the physicians' services market. These include dental association involvement in restraints on advertising, the accreditation of dental schools, and the development and ownership of prepayment plans.

Barriers to competition

Dentistry, like medicine, is practiced in a market with substantial barriers to competition (e.g., licensing, state practice acts, inadequate consumer information, and heterogeneous products). On the other hand, since there is less private and public third-party coverage, price competition may be present to a greater extent than in the physicians' services or the hospital markets. A thorough examination of the evidence on barriers to competition is necessary in order to judge the degree of competitiveness in the market for dental services.

Legal restraints: The effects of licensing and other medical practice acts on dentists' prices and incomes have been addressed by several researchers. Dentistry, as mentioned previously, is an occupation with state licensing and little reciprocity among states. Pashigian (1979) finds that interstate migration is substantially reduced in states with reciprocity restrictions. Other studies carry these results one step further to find that the absence of reciprocal licensing arrangements is associated with higher fees and net incomes among dentists (Conrad and Emerson, 1981). Using 1970 data from the American Dental Association (ADA), Shepard (1978) provides results that indicate that the price of dental services and mean dentist incomes are between 12 and 15 percent higher in nonreciprocity jurisdictions.

State medical practice acts, which restrict the number and functions of dental auxiliaries and the number of offices per dentist, also have a potential to impact on dental productivity, fees, and incomes. Many states have abandoned the "explicit definition" form of statute where a dental auxiliary's tasks were rigidly defined. The new statutes allow the dentist to delegate to his/her auxiliaries any tasks not requiring the dentists' professional judgment and skill, and allow the dental boards to determine the precise tasks that the auxiliaries can perform. Unfortunately, the majority of dental boards have not permitted expanded functions to the auxiliaries. In most states, in fact, there is no separately constituted board for dental auxiliaries; the state's dental licensing board performs the licensing function for dental auxiliaries, as well as for dentists. Studies indicate that limits on the number of offices per dentist are associated with higher dentists' fees and incomes. Restrictions on the number of hygienists per dentist result in higher fees, but not higher net income (Conrad and Emerson, 1981). One experimental program to study the effects of introducing expanded function dental assistants (EFDA) into three types of dental practices found that a dentist in solo practice can double his or her net revenue by hiring one EFDA (Lipscomb and Scheffler, 1975). Results from another study find that carefully selected high school graduates can be trained to perform certain basic dental procedures with as high quality as advanced undergraduate dental students achieve (Hammons and Jameson, 1967).

Available evidence, therefore, does appear to indicate that licensing—particularly reciprocity provisions—and provisions of state medical practice acts do create barriers to competition. Some statutory restrictions on the use of auxiliary personnel reduce practitioner incomes, by reducing their productivity, and thus create inefficiencies in the market.

Professional control: The American Dental Association (ADA) and its local and state societies have exercised control over dental education and the establishment of prepaid dental plans. Paul Feldstein (1977) sees such controls as consistent with a monopolist's position of attempting to limit the supply of practitioners and, at the same time, to provide increased demand for the services of existing practitioners. However, expansion of dental school capacity in recent years and increases in the supply of dentists suggest that professional control in this market is far from complete.

The ADA has argued that examination and educational attainment requirements are necessary to assure the competence of those entering the profession. Accreditation of dental schools, prior to 1973, was under the direct control of the Council on Dental Education of the ADA. In 1973, the ADA approved the establishment of an independent Commission on Accreditation of Dental and Dental Auxiliary Education Programs to assume the function. The power of the ADA has not been sufficient to block legislation to assist the growth and renovation of existing dental schools and the establishment of new ones. According to a recent ADA report, the number of dental graduates has nearly doubled between 1962 and 1976, with further increases expected in the near future (American Dental Association, 1980).

Insurance: The population with some insurance coverage for dental expenses has increased dramatically over the past two decades. In 1967, less than 5 percent of the population had any dental insurance; by 1979, over 30 percent had some coverage (HIAA, 1981). The rapid growth in dental expense insurance has occured under the highly favorable conditions which have, generally, lead to comprehensive insuredness in the U.S.: tax subsidies to health insurance purchases and employment-based group insurance, frequently subsidized by the employer. In the presence of these factors, it is reasonable to expect that dental expense insurance will become even more common in the future.

Organized dentistry has had some influence on the development of dental insurance. In a role analagous to that of the AMA with respect to the establishment of Blue Shield plans, the ADA and its constituent state and county dental associations have financially supported the development of Delta dental plans; some of these plans are owned by local dental associations. Delta dental plans are prepayment plans providing dental care through participating dentists who are reimbursed on a fee-for-service basis, according to their "usual, customary, and reasonable (UCR) fees". As noted earlier, the UCR reimbursement method has been criticized as the contributing factor to the rapid increase in physician fee levels over recent years. At present, there are 43 Delta dental plans or dental service corporations in 47 states (Greenberg, 1980).

Fully identifying the anticompetitive effects of provider influence on Delta dental boards (until settlement of an antitrust suit, all fifteen board members of Ohio's Delta dental plan were physicians) is equivalent to the empirical problems associated with establishing the effects of physician control of the boards of Blue Shield plans. Such effects may become more important with the growth of dental insurance during the last decade. In 1965, only two million people were enrolled in prepaid dental plans; by 1976, this number had grown to 30 million with coverage through more than 11,000 employer groups. By 1978, the population covered by dental insurance had risen to 68 million (Greenberg, 1980).

Contrary to the evidence on other medical insurance plans, it appears that dental insurers, including Delta dental, have been active in implementing cost containment procedures. This difference may be due to the fact that dental insurance covers prevention services, while the primary purpose of general health insurance is to reduce the risk of sudden, severe, unexpected expenditures for illness:

> Dental disease is essentially chronic, which changes the nature of the risk of dental insurance, rendering that risk relatively predictable and thus making utilization patterns for dental care quite different from medical care (Praiss, *et al.*, 1978, p. 1217).

Other reasons for the widespread use of cost containment mechanisms are the highly elective and postponable nature of dental care, and the potential for expensive corrective procedures and devices.

Another important element in this market is the substantial competition among the dental services' plans. Delta dental plan's share of the market has declined substantially between 1968 and 1977, from 24.7 percent to 9.6 percent in terms of benefits incurred and from 23.1 percent to 11.7 percent in terms of gross enrollment. In contrast, Blue Shield has had a relatively stable market share of about 35 percent in the market for medical insurance. Greenberg (1980) suggests that this apparent competition among dental insurers stems from the fact that Delta plans do not have a monopoly on nonprofit insurance. Blue Cross and Blue Shield plans also sell dental insurance, and in fact their share of the market has been increasing. Delta also does not receive any discounts on charges and finally, Delta does not have the trademark recognition of Blue Cross and Blue Shield.

Consumer information: The competitiveness of the dental care market depends in part on the nature and extent of consumer ignorance in the market. If the patient relies upon the dentist to determine the treatment regimen, there is the possibility that the prescription will (inordinately) benefit the dentist's economic interests. Advertising restrictions can also be seen as a method of increasing information costs to the patient. Such restrictions can be a means of raising the costs of entry into the market by making it more difficult for new entrants to establish name recognition. The two major questions to be answered in this area are: (1) What is the extent to which increased advertising would affect the competitiveness of the market? and (2) How much do advertising restrictions and other limits on consumer information in this market affect the ability of dentists to prescribe treatment regimens to maximize their earnings?

There is very little empirical evidence on these issues. Although advertising restrictions are beginning to be challenged in the courts, they still are generally observed within the dental profession. There are general prohibitions against the use of a company, business name, corporation, or an advertising agent. Price advertising is very limited. Empirical studies of the impacts of such restrictions on dental fees and incomes are limited. In Arizona and Maine, although price advertising is prohibited under the dental practice acts, dentists advertise dentures at prices which are less than those charged by denturists who sell such dentures directly to the public (Conrad and Emerson, 1981).

Conrad and Emerson (1981) conclude that whatever monopoly power the dental associations had to restrict advertising is being eroded. Pressures for information disclosure from public and private sources are challenging the "guild system." Nevertheless, they foresee the possibility that increased growth of private dental insurance plan enrollment and deeper benefit packages may create disincentives for advertising. Third-party payers have less incentive to acquire individual price information when they are engaged in multiple transactions across all participating dentists. The insurer, due to its size, is able to obtain such information by other means. Empirical tests of the impact of existing advertising bans on dentists' incomes and fees indicate that such bans have had a positive impact on dentists' incomes, but no effect on fees (Conrad and Emerson, 1981).

Few studies of the potential for supplier-induced demand in this market have been conducted. Newhouse (1970) found a positive relationship between the dentist-to-population ratio and the price of dental services, as did Kushman and Scheffler (1978). There has been no attempt by the authors of either of these studies to interpret their findings as suggesting that supplier-induced demand is evident in this market. Littleton (1980) reviews differences between the physicians' services market and the dental market and suggests that these differences may make comparison between the two markets inappropriate. The existence of supplier-induced demand in the physicians' services market, if proved, does not necessarily imply that dentists have the same demand creation power.

In general, it should be recognized that many aspects of dental treatment are elective and are not life-threatening; the patient, as a last resort, can have the offending tooth or teeth pulled and dentures inserted as an alternative to expensive treatments; and the incidence of third-party insurance to cover expensive elective treatments is still very limited. All these factors would lead one to hypothesize that, if there is a supplier-induced demand in the dental services market, it may be confined to very small (but possibly high-cost) segments of the market.

Public policies: The role of the public sector in the provision of dental services has been limited. Dental services are not covered under Medicare; Medicaid may provide such services as a state option, but states are not required to provide these services. For this reason, government policies with respect to the reimbursement for dental expenditures are expected to have little impact on the competitiveness of the market. An analysis of the participation of private dentists in an optional dental program under Medi-Cal (the California Medicaid Program) indicates that, even in an area with abundant dentists, lagging reimbursement rates can be a barrier to dentists' participation (Kushman, 1978).

Antitrust applications: Another public policy which has been used to promote a more competitive market is the filing of antitrust suits to eliminate alleged anticompetitive practices. Suits have been brought against a dental association for conspiring to prevent insurance companies from implementing cost-cutting programs (*FTC News,* June 24, 1980; April 1, 1980). Investigations have been made of the restraints on dental hygienists' practice; however, the ambiguity of the results of the investigation is indicative of the problems with any antitrust action in the health care area. In this case, proponents of the restrictions raise the "quality of care" issue as a justification for rules preventing dental hygienists from practicing independently. The Federal Trade Commission (FTC) elected to take no action because it felt it did not possess sufficient information (*FTC News*, November 24, 1980) to rule on the validity of such a claim.

The problems with using the antitrust laws to discourage anti-competitive behavior in the dental services market are, for the most part, similar to those discussed in Chapter 4, with respect to the physicians services market. The "learned professions" exemption, the state action doctrine, the McCarran-Ferguson exemption, and the necessity for substantiation of an interstate commerce claim, are all legal doctrines restricting the use of the antitrust laws as a public policy tool.

Perhaps the more significant problem confronting those who seek to make the dental services market more competitive, through such means as the antitrust laws, is that the evidence of the competitive effects of removing legal or professional restrictions is ambiguous at best. For example, in a study of the impacts of state restrictions on the use of allied dental professionals, Saving (1980) obtains very ambiguous results; there is no evidence to support the thesis that a wholesale removal of restrictions will result in significant fee reductions. Part of the problem is the lack of a baseline from which to judge the particular degree of restrictiveness in any one state.

Price competition

An evaluation of price competition in the market for dental services necessarily involves two components: (1) the extent to which there is price competition among dentists; and (2) the extent to which there is price competition between dentists and alternative providers such as denturists.

Empirical evidence on the existence of price competition among dentists is confined to studies which attempt to discern whether dentists price their services as monopolists or as competitors. Evidence is found in support of both points of view. Kushman and Scheffler (1978) estimate the determinants of dental prices, using a sample of over 2,000 observations from individual dentists; their findings are consistent with a conclusion that dentists possess some degree of monopoly power. House (1981), on the other side, argues that patient waiting time must be included as components of the "full price" of dental care.[1] In this case, competitive markets would be expected to result in unequal fee levels among providers in the same community and differing provider-to-population ratios across communities. House finds support for the hypothesized relationships in his empirical results. For this reason, he concludes that dentists, in fact, do price in a competitive fashion, once patient waiting-time, included as a determinant of a dentist's fee, is accounted for. Given these limited findings, the question as to whether dentists price monopolistically or competitively is not easily answered, at present.

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[1] Several studies of the physicians' services market also examine time as a factor affecting the full costs of medical care to the patient (Acton, 1975, 1976; Sloan and Lorant, 1976, 1977; Guterman *et al.*, 1980; and others).

Evidence on price competition between dentists and alternative providers, such as denturists, is even more limited. The one anecdotal example, discussed earlier in this section, indicates that in states where denturists can sell directly to the public, the price of dentures fitted by dentists is lower than in those states where dentures can only be sole through dentists. P. Feldstein (1977) quotes an editorial on the denturist issue:

> Organized dentistry should set up some systems for supplying low-cost dentures to the indigent or near-indigent all over the country, but especially in those states where the legislatures are considering bills that would allow dental mechanics to construct dentures and deliver them directly to the patient. . . (p. 89).

In most states, dental practice acts and licensure of dental laboratories have been effective in making the issue of price competition among dentists and potential substitutes rather moot. Licensing has been used as a vehicle to assure that allied dental professionals function solely as complements to dentists.

Nonprice competition

Since the available evidence is inconclusive on the issue of price competition in the market for dentists' services, it is not surprising that there is even less evidence on nonprice competition. House (1981) suggests that factors such as patient waiting time should be considered a "price." On the other hand, Kushman and Scheffler (1978) argue that, if waiting time is relevant to competition in the dental services market, it should be included as a nonprice element. Other nonprice components such as quality of care, travel time, and physical amenities, have not been explicitly considered in empirical studies of the dental services market.

Summary

Given the elective and postponable nature of many dental services, the relatively low incidence of insurance, and the limited public sector involvement in the market, it is realistic to assume that attempts on the part of the dental profession to collude will be met with limited success. The responsiveness of patients to price competition suggest that if monopoly power causes prices to rise, patients will seek other alternatives (e.g., dentures instead of restorations, or a reduced number of visits). In addition, the presence of cost-conscious insurers in this market acts as a further deterrent to monopoly power.

The dearth of empirical evidence on competition in the market for dental services indicates that this is a fertile area for new research. The supply of dentists is growing more rapidly than the population; antitrust cases and deregulation movement are chipping away at restrictive dental practice acts and licensure provisions. In addition, dental insurance is becoming far more common. Consequently, it may be the case that many of the phenomena observed in the physicians' services market may occur in the dental services market in the future (e.g. specialization, or demand creation). On the other hand, the differences between these markets may imply that little direct comparison is appropriate.

Evidence on competition among insurance plans and alternative delivery systems

Overview of the market

Today, an overwhelming proportion of families in the United States have insurance to protect them from the financial implications of illness. The coverage for particular services varies but is greatest for those health care expenses which are most costly (e.g., hospital care). Chapter 2, above, discussed some general problems of the market for health services which are created by the presence and form of insurance. In Chapters 3, 4, and 5, the impact of health insurance on the markets for hospital services, physicians' services, and dental services was the topical issue.

The presence of insurance in the market for health services could be a neutral influence.[1] However, the existence of substantial tax subsidies creates incentives for consumers to "overinsure" (Chapter 2). As a result, consumers purchase insurance coverage against relatively small financial risks and then face incentives to utilize additional health services.

The structure, conduct, and performance of the market for insurance has substantial implications for the conduct and performance of the market for health services. In this chapter, the evidence on barriers to competition, price competition, and nonprice competition in the health insurance market is reviewed. Two types of insurers are examined:

- *Traditional insurers,* which specify a set of benefits and reimburse the provider, chosen by the consumer, on a fee-for-service basis; and
- *Prepaid health services plans,* which provide services to consumers directly through a specified set of providers.

In this presentation, alternative delivery systems (i.e., Health Maintenance Organizations and other prepaid group practices) are considered to be insurance plans which provide (usually) full coverage for benefits provided to insured consumers only when services are obtained from a specified set of providers. Under traditional insurance, the consumer obtains services from any available provider in the community[2] who is then reimbursed on a fee-for-service basis; under prepaid health services plans, the consumer only receives services from providers associated with the prepaid health service plan, who are (usually) paid a salary or have some other nonfee-for-service arrangement. Consumers enrolled in Individual Practice Association plans receive services from fee-for service physicians who are at risk for some portion of high utilization decisions.

The presence of alternative delivery systems (HMOs)[3] in the market for health insurance creates several competitive alternatives which will be considered:

- Traditional insurers may compete with traditional insurers.
- Traditional insurers may compete with HMOs.
- HMOs may compete with HMOs.

Several forms of traditional insurance exist and a variety of arrangements exist as well in the HMO segment of the market. The forms and structure of traditional insurance markets and of HMO markets are reviewed briefly in the following sections.

Traditional insurance and the fee-for-service delivery system: Prior to this century, there was concern about health but little concern about the costs of health care. Medical knowledge was limited and, while the patient might die, it was unlikely that the patient's family would have to declare bankruptcy as a result of the illness. Consequently, health insurance was generally unavailable prior to World War I. A few small commercial insurance companies offered accident and health protection, but during the 1930s, many of these insurers dropped out of this market because of poor actuarial experiences (Woodward, 1978).

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[1] Pauly (1980) suggests that efficient insurance arrangements might include: (a) a competitive insurance market; (b) the absence of adverse selection; (c) the absence of economies of scale in monitoring the experience and activities of the insured; and (d) the ability of the insurer to always determine the total amount of insurance the individual has purchased.

[2] Blue Cross, Blue Shield, and Medicare sometimes restrict the set of providers; however, most physicians and hospitals may be reimbursed under these plans.

[3] The designation "HMO" will be used throughout this chapter to refer to any insurance plan which involves prepayment *and* services delivery.

During the Great Depression of the 1930s many people found themselves unable to pay for routine health care for the first time. Hospitals and physicians experienced both reduced demand for their services and an increase in the number of patients unable to pay for services received. The response to this crisis was the development of Blue Cross and Blue Shield coverage for hospital and physician services, respectively. This development represented a significant shift in the way health insurance was provided in this country. The few private insurers in this market had provided insurance that paid a cash indemnity to the individual if an accident or illness occurred. Blue Cross plans however, provided medical expense coverage; the hospital was reimbursed directly by Blue Cross for service benefits rendered.[4] Under this form of insurance, control over health care financing shifted from the patient to the provider (Woodward, 1978).

Blue Cross and Blue Shield plans were organized by hospitals and physicians to provide consumers a mechanism to prepay hospital and physician expenses. These organizations are legally nonprofit public service firms and their only business is the financing of health services. Although hospitals and physicians controlled many of the plans in the early years of their development, and the AHA assisted Blue Cross plans in market growth, the dominance of the plans by organized medicine is no longer a formal arrangement. Instead, most Blue Cross and Blue Shield plans are now controlled by boards which are composed of both public representatives[5] and providers, with public representatives constituting a majority.[6]

The commercial insurance business began to develop during the 1940s, after the Blue Cross and Blue Shield plans were established. Much of the growth in commercial business was prompted by the trend to employment-based health insurance that began during World War II. Most commercial insurance companies offer life, property, casualty, and other insurance coverage to private industry. As interest in employment-based health insurance developed, these firms expanded to offer this additional service to client firms. In 1942, only 37 companies were writing group health insurance; by 1951, there were 212 companies in this market (Foliman, 1965). Commercial insurers may be either for-profit or nonprofit, and are controlled by stockholders in for-profit firms, or by policyholders in nonprofit firms, rather than by providers or by public representatives.

In 1979, there were 68 separate Blue Cross plans and 67 Blue Shield plans operating in the United States and Puerto Rico. Of these plans, 26 were joint plans, making a total of 112 Blue Cross and Blue Shield plans. In 1975, the plans had approximately half of all the health insurance business in the United States. In addition, since market areas are agreed upon at the national level, in most areas Blue Cross and Blue Shield plans do not compete among themselves. (In Illinois, two Blue Cross plans are in direct competition; in several other states, Blue Cross and Blue Shield plans compete. However, competition among the plans is still relatively rare.) Frech and Ginsburg (1978) suggest, ". . . from a national antitrust perspective, we can treat the entire Blue Cross/Blue Shield complex as one firm" (p. 212).

Commercial insurers are responsible for the other half of the covered population. By the mid–1970s, there were over 300 commercial insurers writing health business;[7] over 50 new firms entered this market between 1958 and 1973 (Frech and Ginsburg, 1978). In addition, there is some evidence that concentration ratios are low in the commercial insurance market (Frech and Ginsburg, 1978). Nationally, however, the eight largest commercial insurers accounted for 39 percent of all commercial business in 1975 (Woodward, 1978), suggesting the opposite: a relatively high degree of concentration in the commercial health insurance market. It should be recognized, however, that commercial insurers compete with Blue Cross and Blue Shield plans within a local market, as well as with other commercial insurers. Consequently, concentration within the commercial market does not imply that concentration is necessarily high within the total market for health insurance.[8]

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[4] Blue Shield provided service benefits to low-income people and indemnity benefits to higher-income enrollees (P. Feldstein, 1977). Indemnity benefits pay the consumer a fixed amount per service provided. Pauly (1969) suggests that indemnity benefits are potentially more efficient than service benefits, creating incentives for consumers to search for lower-priced providers.

[5] A "public representative" is defined as an individual who is not an employee of, nor has a financial interest in a health care facility, nor is a member of a health profession which provides health services (Berman, 1978).

[6] Berman (1978) reports that in 1976, 67 percent of Blue Cross board members were public representatives and that, nationwide, over 90 percent of Blue Cross plan members are in plans controlled by public boards. However, in 1977, approximately 43 percent of all Blue Shield enrollees were covered by plans in which physicians comprised at least 50 percent of the board (Kass and Pautler, 1979)

[7] Woodward (1978) says there are over 650 private, commercial underwriters in the United States.

If Blue Cross and Blue Shield plans are treated as one large national firm, a national concentration ratio would be very large. Health insurance is sold, primarily, in local markets, however. To determine the extent of concentration within the market for traditional insurance, it would be necessary to examine concentration within local markets in addition to the national distribution.

Alternative delivery systems: Traditional insurance provides a financing mechanism to permit consumers to obtain health services from any participating provider in the community, who is reimbursed on a fee-for-service basis by the insurer (with the consumer responsible for any excess of fee over insurance reimbursement). Other types of arrangements have been developed to provide protection against the risk of illness. Some form of prepaid health service (HMOs) has been in existence since the late nineteenth century. Under this form of insurance, the insurer collects a fixed dollar amount from each enrollee and, in return, guarantees to provide a specified set of medical and health services to the enrollee, as needed. HMOs perform a dual function: they provide insurance and they provide an organized health care delivery system to the enrollee. Insured members must pay out-of-pocket the full costs of any care they obtain outside of HMO providers, under normal circumstances. No out-of-pocket expense is required when services of HMO providers are obtained, for most types of services. Physicians in HMOs are usually paid for their services on a salary or capitation basis. HMOs may own hospitals or may contract with hospitals for services provided to members.

The development of HMOs paralleled that of traditional insurance.[9] By the end of the nineteenth century, prepaid health services were available in most metropolitan areas through mutual aid and benevolent societies, or other such organizations. In rural areas, prepaid health plans were offered primarily by the railroad, mining, and lumber industries to their employees.

During the late 1930s and 1940s, more prepaid plans were developed in response to the emergence of employment-based health insurance. Group Health Association, the Kaiser plan, the Health Insurance Plan of Greater New York, and the Group Health Cooperative of Puget Sound were among the HMOs initiated during this period. Despite the existence of state legal restrictions and opposition by organized medicine which affected the development of the HMOs, these plans grew rapidly in many areas. Through the 1960s, most HMOs were concentrated on the West Coast and in several metropolitan areas in the East.

Rapidly rising health expenditures and inflation in health care prices following the implementation of Medicare and Medicaid in the late 1960s created a situation where policy makers' attention was directed to HMOs as a potential solution to these problems. The Health Maintenance Organization Act of 1973 (P.L. 93–22) was passed with the intent to facilitate the expansion of HMOs into more markets. This act contained provisions to exempt federally qualified HMOs from state laws which presented barriers to their development. In addition, employers with 25 or more employees were required under P.L. 93–22 to offer a federally qualified HMO as an option to existing employment-based insurance plans, if such an HMO existed in the employment area.

Growth of HMOs has been rapid during the past decade. As of June 30, 1980, there were 236 prepaid health plans in the U.S. providing services to a total enrollment of over 9 million people. However, the geographic distribution of HMOs remains uneven, with over 58 percent of all HMO membership concentrated in the West by 1980, and 12 states with no HMO offering services.

There is a wide range of diversity among HMOs. The type and structure of the HMO is important because of the incentives created for the physician-provider and the implications for the extent of competition among HMOs and with the traditional insurance/fee-for-service delivery system. Luft (1981) lists the following characteristics which account for variations among HMOs:

- *Method of paying the physician:* HMOs may choose to pay physicians with a fixed salary, by capitation, or on a fee-for-service basis.
- *Practice setting:* HMO services may be provided at a single site or they may be dispersed over a large number of sites.
- *The defined enrollee population:* Operating HMOs vary in size from 3,000 to over 1,000,000 enrollees. In some cases, enrollees are composed of

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[8] Even if concentration in the insurance industry were high, this fact would not necessarily imply that competition was weak in this market. Economists use concentration measures as a method for determining the *potential* monopolistic forces in the market. Competition can exist, however, in any market with more than one seller.

[9] Much of the information presented on the history of HMOs is drawn from Luft (1981), Chapter 2.

homogenous populations ranging from university faculty and staff, on one hand, to Medicaid recipients, on the other hand. In other cases, HMOs enroll a rather broad cross-section of the community. The geographic base of enrollment may be concentrated in a single town or widely dispersed throughout an entire region. The fact that an HMO treats a defined population on a prepaid basis does not preclude it from also treating individual patients on a fee-for-service basis. Thus, some organizations have mixed prepaid (HMO) and fee-for-service patient populations.

- *Fixed payment per HMO enrollee:* The fixed payment per enrollee also can vary considerably for several reasons, including the use of copayments to varying degrees, and the scope of services offered under different HMO benefits packages.

Luft classifies HMOs into three basic models:

- *Staff model:* In a staff model HMO, the physicians are employed directly by the health plan or by a related organization. For instance, in some county-sponsored plans, the physicians may be employees of the county rather than of the HMO.
- *Group model:* In a group model plan, physicians are members of a medical partnership or corporation which, in turn, contracts with the HMO to provide physician services.
- *Individual practice associations:* Individual practice association model HMOs usually involve a relatively large number of independent physicians or physician groups who draw only a minority of their patients from the HMO. The contractual agreement typically specifies fee levels and risk-sharing by the physicians. For competitive marketing purposes, an HMO may, in some cases, constitute itself as an individual practice association for purposes of federal qualification in order to avoid designation as a group or staff model.

Wolinsky (1980) describes eight different types of HMOs based upon: (1) whether the HMO owns a hospital for the exclusive use of HMO members; (2) whether physicians are staff, group practice, or independent contractors (with or without some independent practice); and (3) whether physicians are salaried or are reimbursed on a fee-for-service basis.

Despite the extensive publicity given to the HMO concept as an alternative to the traditional health care system, it is important to realize that, in 1980, the HMO market share nationally was only about 4 percent. (Although in some metropolitan areas, over 20 percent of the insured population is enrolled in an HMO.) Consequently, HMOs provide competition for traditional insurance/fee-for-service delivery in some areas of the country, but are not yet sufficiently widespread to have a substantial impact on the national market for health insurance.

Barriers to competition

There are numerous barriers to competition in the market for health insurance, as in other health services markets, which affect the type and extent of competition possible in the market, and, consequently, the performance of the market. In this section, the nature of barriers to competition in the market for health insurance and implications for market performance are described. Four categories of potential barriers to competition are considered:

- Legal restraints;
- Professional control;
- Consumer information; and
- Public sector policies.

Legal restraints: There are a wide range of legal and regulatory conditions which apply to insurance organizations. These include: (1) state regulation of the industry; (2) federal regulation of HMOs; and (3) federal and state health planning laws. Each type of legal restraint on the insurance industry has implications for the conduct and performance of this market.

Insurance regulation is performed on the state level and, in many ways, impacts differentially on the Blue plans, for-profits, "domestic" (local) insurers, and HMOs. Until the HMO Act of 1973, state regulation of the insurance industry was a major impediment to HMO expansion. The HMO Act of 1973 substitutes federal regulation of HMOs for the state regulation which applied before the Act was passed. Health planning laws, particularly certificate-of-need requirements, have impacted most heavily on the integral delivery system aspects of HMOs.

The nature of legal restraints and the evidence on the impact of these restraints on the market for health insurance is organized below by type of insurance plan/delivery system.

Traditional insurance/fee-for-service delivery system. The insurance industry is extensively regulated, and this regulation has been increased over time. Under the present system of state regulation of insurance companies:

- Standards are established before a company can obtain and continue its license, including standards with respect to assets, reserves, and investments
- Each company must file annual financial statements, and permit detailed periodic examinations by state insurance departments.

- Individual and group policy forms and, in many states, premium rates must be filed for approval with the State Insurance Commission.
- Arbitrary discriminatory differences in premium rates are prohibited under the State Fair Trade Practices Act.
- The Uniform Individual Accident and Sickness Policy Provisions of the National Association of Insurance Commissioners have been adopted by all states and provide for protection of consumers through regulation of such factors as grace periods, proof of loss, cancellations, and claims procedures (Robbins, 1978).

In addition to regulations which affect the financial dealings of insurers and protect consumers, states also assess premium taxes on most types of insurance. This particular state practice frequently discriminates between the Blue plans and commercial insurance plans, with the Blues being exempted from or allowed to pay a lower premium tax. The result of this exemption is that Blue Cross and Blue Shield plans have a competitive advantage in price over commercial firms; this advantage is reinforced by the exemption of the Blue plans from other taxes (e.g., property) in some states.

Many states have different regulations for Blue Cross and Blue Shield plans than for commercial insurers on other aspects, as well. Required reserves are lower or nonexistent for the plans in most states. Some states also regulate Blue Cross and Blue Shield rates under different, more lenient, standards than those applied to commercial insurance. On the other hand, the plans are often required by state law to have open enrollment seasons and to offer individual as well as group policies; these requirements are not ordinarily applied to commerical carriers.

It is reasonable to assume that differential regulation would imply a competitive advantage to Blue Cross and Blue Shield. That Blue Cross and Blue Shield plans do not completely dominate the health insurance market has been attributed to two factors (Frech and Ginsburg, 1978):

1. The Blue plans are uninterested in selling policies with large deductibles and coinsurance, so that this share of the market goes to commercial insurers by default.
2. The Blue plans are inefficient, due to the absence of profitability as a goal in operations.

The evidence on these points is mixed. Berman (1978) concedes that, "Blue Cross plans limit their product line to comprehensive coverage. This limitation reflects the long-held belief that such coverage is in the best interest of the consumer, allowing for maximization of the benefits that can be received from available health dollars" (p. 243). Frech and Ginsburg (1978) find that, in 1963, Blue Cross provided much more comprehensive insurance than did commercial insurers: 90 percent or more of medical expenses were covered for 73 percent of Blue Cross hospital admissions, compared with 59 percent of commercially insured admissions. This and other evidence (Frech, 1974) on the Blue plans' ideological preference for comprehensive coverage may, in part, explain the failure of Blue Cross and Blue Shield plans to completely dominate the market despite their advantages under state regulations.

The evidence on inefficiency in the Blue plans, as an explanation of their failure to increase market share, is mixed. Blair, *et al.*, (1975) find that economies of scale do not appear evident for Blue Cross and Blue Shield plans, although such economies have been detected for commercial insurers. Frech and Ginsburg (1978) find that state regulatory advantages (tax exemptions) are associated with higher administrative costs among Blue Cross plans, which the authors interpret as evidence of inefficiency. Vogel (1977) finds that taxation of nonprofit firms is associated with lower administrative costs, which he interprets as evidence that as taxation increases, nonprofit plans are forced to become more efficient in order to maintain market share. On the other hand, the General Accounting Office (1975) reports that Blue Cross plans were found to be substantially more efficient (i.e., less costly per claim) than either the commercial intermediaries or the federal government in processing Medicare claims. Similarly, Kass and Pautler (1981), using more recent data, find no convincing evidence that Blue Cross or Blue Shield plans are more inefficient than other insurers.

Whether Blue Cross and Blue Shield plans respond to the competitive advantage they receive from differential regulation and taxation by expanding market share, by allowing inefficiency in management, or by offering more comprehensive benefits at lower premiums, it seems evident that this differential regulation of traditional insurers must have implications for performance of the market.

Alternative delivery systems. Three types of legal restraints have affected the ability of HMOs to compete in the market for health insurance:

- State regulations;
- Federal regulations; and
- Health planning laws.

State regulation of the health insurance market has had a restraining influence on the development of HMOs. Prior to the passage of the federal HMO Act of 1973, many states had laws that prohibited the establishment of medical service plans not under the direct control of fee-for-service physicians (Kissam, 1978). However, these barriers to entry were largely removed by the HMO Act and, by 1980, 38 states had passed HMO-enabling legislation (Aspen Systems Corporation, 1980). Despite the improvements in state regulatory approaches to HMOs wrought by the HMO Act, many state regulatory mechanisms remain in place which create difficulties for HMO establishment and functioning. Because HMOs involve both insurance and delivery of services, regulatory approaches may combine elements of insurance regulation *and* medical practice regulation. Luft (1981) lists characteristics of state regulation of HMOs and the number of states having that approach:

- Regulation by Department of Insurance (24 states);
- Regulation by Department of Insurance *and* Department of Health (7 states);
- Open enrollment requirements (20 states);
- Quality and/or utilization review (35 states); and
- Rate approval (33 states)(p. 4.26).

Unlike traditional insurers, HMOs may be subject to state laws which require them to hold open enrollment periods and to accept high-risk subscribers. In addition, they may be required to provide extensive financial, utilization, and quality control data not required of traditional insurers.

The major impact of these state provisions on HMOs appears to be an increase in the cost of doing business. While commercial insurers, in the traditional insurance market, are more heavily taxed than are the Blue plans, HMOs may be at an even greater disadvantage competitively as a result of more extensive state regulatory actions (Luft, 1981). However, the state regulatory environment is more favorable today than it was in 1973 when the HMO Act was passed by the federal government.

Federal regulation of HMOs is through the Health Maintenance Organization Act of 1973. This act contains provisions that exempt federally qualified HMOs from state laws requiring open panel plans, medical society approval, and capitalization and reserve requirements under state insurance codes. To qualify for federal approval, however, HMOs were required to provide extensive benefits not routinely offered by traditional insurers (e.g., mental health/drug abuse care benefits), to hold open enrollment to individual subscribers once a year, and to use community rating, rather than experience rating,[10] for all enrollees.

Since these requirements put HMOs at a competitive disadvantage with respect to traditional insurers, many HMOs did not seek federal qualification. In 1976, the HMO Act was amended to relax the mandatory open-enrollment requirement, modify the community rating rules, and to reduce the scope of mandatory benefits. As a result, more existing HMOs began to seek qualification. The major attraction of federal qualification for HMOs is the requirement that employers with 25 or more employees must offer a federally qualified HMO option, if one exists in the local area. In addition, some federal funds for planning, development, and expansion of services are available to federally qualified HMOs.

The impact of the HMO Act on the ability of HMOs to compete against traditional insurers is ambiguous. Community-rating requirements and mandated benefits reduce the flexibility of HMOs and decrease their ability to compete on the basis of price. On the other hand, availability of funding for development and expansion of HMOs and the requirement that employers offer an HMO option create competitive advantages for HMOs. The relatively rapid growth of HMOs and expansion of existing plans suggests that, overall, the 1973 HMO Act has, at a minimum, been neutral or has actually benefited some existing HMOs.

Health planning requirements, at the federal and state levels, have had a potential impact on the expansion and on competitiveness of HMOs with traditional insurers, in the past. Capital expenditure review programs have been implemented over the past decade which may have constrained the ability of HMOs to build hospitals and expand facilities. Under Section 1122 of P.L. 92–603, institutions which invest in new facilities or capital equipment without approval from designated agencies could be denied reimbursements under the Medicare and Medicaid programs. Similar certificate-of-need (CON) provisions had been passed by 36 states by 1978. Nearly all states were participating in the Section 1122 program, or had their own legislation by that year; P.L. 93–641 required states to establish CON programs to qualify for federal subsidies for health planning (Salkever and Bice, 1979).

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[10] "Community rating" of premiums requires that premiums are set at the average financial risk level of everyone in the relevant population. "Experience rating" of premiums is a method which establishes the premium at the level which takes into consideration the risk to which the individual is exposed. Huang and Rosett (1972) report that community rating imposes heavier costs on blacks and the poor, while benefiting whites and higher income individuals. Pauly (1969) suggests that community rating causes low risk individuals to buy too little insurance and high-risk individuals to buy too much.

As HMOs expand, they need to build facilities to support increased enrollments. CON requirements may create a situation in which HMO growth is constrained by an inability to obtain necessary approvals for facilities construction. Havighurst (1973) says, "A strong argument exists for not extending certificate-of-need statutes to hospital construction by a health maintenance organization" (p. 1207). These arguments include the HMOs' competitive impact on traditional fee-for-service providers. He notes that encounters between HMOs and certificate-of-need agencies over facilities construction have occurred. Major HMOs in the West, where CON legislation is favorable to HMOs, have encountered difficulty in gaining approval for the construction of impatient facilities. Havighurst notes that, in other states, with no provisions for HMO construction, CON laws may constitute a substantial barrier to entry and growth for these organizations. He advocates a total exemption of HMOs from CON approval, despite his acknowledgment that no evidence has been found (by 1973) to indicate that CON laws have restricted HMO growth. A rather limited survey of 25 HMOs resulted in a finding that 14 had had difficulty with planning agencies on issues of capital expansion (O'Donoghue and Carlson, 1974). Goldberg and Greenberg (1981), however, find that CON laws have not been a barrier to HMO growth.

Current federal legislation reflects concern that HMO growth may be constrained by the existence of CON requirements. Under P.L. 96–79, states are required to exempt HMOs from state CON requirements by January, 1983. Thus, while CON may have been a barrier to entry for new HMOs in past years, this restriction will be lifted within the near future.

The potential for CON legislation to inhibit the growth of HMOs is evident. Whether the past application of health planning laws has resulted in a diminuation of competitive forces in the market for health services has not yet been determined.

Professional controls: Medical care is a complex entity requiring the application of sophisticated knowledge and technology. As a result, there is no aspect of the market for health services which is not dominated by providers. In the market for insurance, the provider groups with the greatest influence are physician and hospital organizations. Although the roles of these groups encompass nearly all aspects of the insurance market, the focus in this section is on:

- Provider control of traditional insurance plans; and
- Attempts to restrain the growth of HMOs.

Provider control of traditional insurance. The control of traditional insurance plans by providers has been documented in the introductory sections of this chapter. Blue Cross plans were first developed during the 1930s, under the auspices of the American Hospital Association, in response to economic conditions which made it difficult for many people to pay for needed hospital care. AHA standards for approval of hospital insurance stated: "Benefits to subscribers should be guaranteed through 'service' contracts with member hospitals as opposed to 'cash' indemnification contracts for hospital expenses, . . . (and) . . . Annual subscription rates (premiums) should be sufficient to remunerate hospitals properly for the services rendered to subscribers" (P. Feldstein, 1977, p. 174).

The AHA had considerably more influence over Blue Cross plans than other insurers, since it owned the Blue Cross emblem and regulated conditions under which the emblem could be used. The AHA conducted active marketing on behalf of the Blue Cross plans, including development of a model law for enablement of nonprofit hospital and medical service plans which became the standard used by many state legislatures. The Blue Cross Commission, which coordinated interactions among the various Blue Cross plans, reported directly to the AHA until 1960. The Blue Cross Association was formed in 1949 and currently represents the 70 individual Blue Cross plans in the U.S., as well as being responsible for national accounts. In 1972, the AHA transferred the ownership of the rights to the Blue Cross emblem to the Blue Cross Association.

At the level of local Blue Cross plans, there is considerable provider control. The AHA, prior to 1972, required that one-third of the Blue Cross plan board of directors be composed of hospital representatives. P. Feldstein (1977) notes that the percentage of hospital and physician members on Blue Cross governing boards has declined over time. However, he reports that, in 1970, the composition of Blue Cross governing boards was: 42 percent hospital representatives;[11] 14 percent physician representatives; and 44 percent public representatives.

Although declining, physician domination of the governing boards of Blue Shield plans also has continued through the present. In 1964, 63 percent of board members were either physicians or executives of medical societies (P. Feldstein, 1977). By 1977, approximately 43 percent of Blue Shield enrollees were covered by plans in which 50 percent or more of the board were physicians (Kass and Pautler, 1979).

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[11] This number includes members who are hospital trustees as well as hospital representatives, along with officially designated hospital representatives.

Commercial insurance plans are also influenced by provider organizations. However, it is less likely that this influence is the result of direct control through representation of providers on the board of trustees. Control of commercial insurers by providers is most probably through the state regulation of insurance plans and through provisions of state medical practice acts, which are developed in consultation with affected provider groups. The extent and impact of this influence on commercial insurers haven't been investigated empirically. Nevertheless, it seems evident that some influence may exist.[12]

Frech and Ginsburg (1978) suggest that provider control of the Blue plans accounts for the ideological preference of these plans for comprehensive insurance. As a result, Blue Cross and Blue Shield plans offer complete insurance at attractive rates on an "all-or-nothing" basis—either the consumer purchases complete insurance or *no* insurance from a Blue Plan. Their examination of data on completeness of coverage under Blue Cross plans and commercial plans leads Frech and Ginsburg to conclude that the Blues have an orientation toward complete coverage which is due to the interest of providers in increasing demand for services and, consequently, increasing provider revenues.

Another potential consequence of provider control of insurance plans is the reduced ability of insurers to control provider costs. Frech and Ginsburg (1978) find that Blue Cross market share is positively associated with higher hospital prices. They interpret this finding as indicating that it is possible that Blue Cross market power reduces insurer efforts at cost control. Feldman and Greenberg (1981), however, report that market share seems to have no impact on any cost control activity, except concurrent review which was positively affected by Blue Cross market share. Goldberg and Greenberg (1977) report on a Blue Shield plan in Oregon that was organized by the medical society in response to the presence of vigorous cost controls by local insurers, and which was followed by a boycott of the insurers until the cost control actions were halted. [13] More recent evidence discussed by Greenberg (1982) suggests that, under some circumstances, provider control of insurance plans decreases the vigorous application of cost containment activities.

A most important hypothesized effect of provider control of insurers on the performance of the market for health insurance is that prices for services will be higher. Accordingly, substantial attention has been directed recently by researchers at the issue of the impact of physician control of Blue Shield plans on the market for physicians services, and especially on physician reimbursement levels under the plans.

Lynk (1979) finds that physician influence on Blue Shield boards results in lower—not higher—maximum customary allowances for procedures and, consequently, lower average levels of payments for procedures. The General Accounting Office (GAO) (1980) reports results that indicate no clear relationship between composition of the board of directors of Blue Shield plans and allowances for selected physician services. Arnould and Eisenstadt (1980) examine the effect of physician control of boards and find that control is associated with higher surgical fees only where Blue Shield plans enjoy a tax advantage over commercial insurers. Anderson, Kass, and Pautler (1981) estimate the Arnould and Eisenstadt model using more precise data and find that the new results are not consistent with the original study findings. Sloan (1981) also examined the relationship between physician control and Blue Shield reimbursement rates. His findings indicate that both medical society appointment of a substantial number of board members, and physician committee control, are associated with higher Blue Shield reimbursement rates.

The most comprehensive study to date of the relationship between Blue Shield board composition and physician reimbursement is that of Kass and Pautler (1979) of the Federal Trade Commission. Using several different measures of provider control of Blue Shield boards, they find that there is evidence that physician control is associated with significantly higher fees. These results are consistent with those of Sloan, but contradict the findings of Lynk and the GAO report.

One other potential effect of provider control of Blue plans may be increased administrative efficiency. Kass and Pautler (1979) suggest that physician-controlled Blue Shield plans might be associated with lower average administrative costs, since these savings could be used to raise physicians' fees directly or to increase insurance output and, thereby, indirectly raise physician fees. Their results, however, indicate no relationship between physician control and efficiency. Eisenstadt and Kennedy (1978) find that administrative efficiency is higher with physician control only in states where the Blue Shield plan enjoys a tax advantage over commercial insurers. Thus, it appears that the evidence on this issue is, at present, ambiguous.

In summary, there has been a considerable amount of research conducted on the impact of provider control on traditional insurance plans. The evidence produced by these studies is mixed:

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[12] Some evidence on the role of physicians in state regulatory activities is provided by Cohen (1980).

[13] This case is, however, nearly 30 years old.

- The Blue plans are ideologically committed to comprehensive insurance and are reluctant to offer coverage with substantial deductibles and coinsurance.
- There is no current evidence that provider control of insurance plans decreases the vigorous application of cost control activities.
- Some studies indicate that physician control of Blue Shield boards is associated with higher average reimbursement levels for selected procedures.
- Administrative efficiency is, apparently, unaffected by the composition of Blue Shield boards.

These results suggest that provider control of traditional insurance may well impact on the competitiveness of the market for health insurance. If provider control leads to more complete insurance for services the demand for services increases and, in addition, consumers become less price-sensitive. Similarly, the implications of physicians exerting control over physician reimbursement through Blue Shield plans are clearly anticompetitive.

Attempts to restrain the growth of HMOs. The health maintenance organization offers an alternative to the traditional insurance/fee-for-service delivery system. HMOs charge a fixed amount per enrollee and, in return, deliver all necessary health services to the enrollee through a specifically designated group of providers. The development of prepaid plans has met with substantial resistance from organized medicine. Fee-for-service physicians have attempted to restrain the growth of HMOs through three activities: (1) restrictive professional practices; (2) the formation and use of Blue Shield plans to deter or discipline HMOs; and (3) the restrictive use of various state laws.

Restrictive professional practices include such actions as exclusion of physicians who join HMOs from county medical societies and hospital medical staffs, the refusal of fee-for-service physicians to consult with or accept referrals from HMO physicians, and the dissemination of (untrue) negative information about HMO operations. These activities, when carried out under the auspices of a state or county medical society, represent professional restraints on competition (Kissam, 1978; Havighurst, 1978).

Organized medicine has also used existing state laws affecting medical practice to restrain the development of HMOs. The type of laws amenable to this use include:

1. Interpretation of state licensing laws to deny licenses to HMO physicians who are associated with such activities as advertising or delegation of medical tasks to support personnel;
2. Using Blue Shield enabling legislation provisions to restrain the development of HMOs, such as requirements that new medical service plans be approved by the county medical society and that the plan be open to all physicians who want to join; and
3. Enforcing legislation forbidding the corporate practice of medicine (i.e., physicians in their professional role may not be directed by nonphysicians).

These actions represent early efforts by organized medicine to restrain HMO development as a competitive force in the market for health services. The primary issues which led to the opposition of organized medicine relate to the delivery system aspects of HMOs rather than the insurance function of the plans. Organized medicine apparently found prepayment for health services and closed-panel physician practice to be a threat to traditional medical practice (Feldstein, 1977). Changes in the legal environment during the 1970s has reduced the ability of fee-for-service practitioners to impede the growth of competitive HMOs, but other methods may be used to block HMO development (Kissam, 1978):

- Quality-of-care arguments may be used to prevent HMOs from implementing cost innovations (e.g., nurse-midwife deliveries of normal pregnancies).
- Individual physicians may engage in actions (e.g., refusals to refer to physicians in HMO practice) which, in total, have the same restraining effect that an organized action would achieve.
- Organized medicine may, under existing law, disseminate information on the characteristics of HMOs, which they find objectionable, for the purpose of informing members, without suggesting joint action.

Other barriers to development and expansion of HMOs may be erected by hospital pricing policies. Hospitals may charge higher prices to HMOs, if they see the HMO as a competitor for patients. In

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[14] Federal prosecution of professional associations for antitrust activity was weak until the mid-1970s due to the exemption of professions from these laws under most conditions. In *Goldfarb vs. Virginia State Bar*, 1975, the Supreme Court removed these exemptions. Since that time, more antitrust activity has been conducted (Luft, 1981).

[15] The Health Maintenance Organization Act of 1973, discussed above, preempts these state laws, so that they no longer pose a barrier to HMO development.

addition, the fact that Blue Cross receives a "discount" (i.e., pays on the basis of selected costs rather than full charges) may cause hospitals to pass on higher charges to HMOs (as well as commercial insurers). Thus, Blue Cross and fee-for-service practices may receive a competitive advantage over HMOs through hospital pricing mechanisms (Kissam, 1978).

Insurance companies may also engage in anticompetitive activities which affect HMOs. Three types of anticompetitive activities are elaborated by Kissam (1978): (1) refusals by Blue Cross and Blue Shield plans to supply certain services to HMOs and their physicians; (2) anticompetitive pricing; and/or (3) the formation of defensive HMOs. The first type of anticompetitive activities are illustrated by cases where Blue Cross has refused to provide new HMOs with reinsurance, marketing, and/or administrative services at a reasonable price. Anticompetitive pricing by traditional insurers may include such activities as offering group policy contracts to employers, contingent upon a minimum employee enrollment level; or offering lower prices on insurance contracts to customers who are sought by HMOs. The result of these actions will be to prevent HMOs from entering the market or expanding, by offering the HMO's potential customers a (short-term) financially attractive alternative, even if the traditional insurer suffers a temporary financial loss.

Finally, traditional insurers and organized medicine may act to restrict HMO growth by developing and operating "defensive" HMOs. These defensive HMOs may prevent independent HMOs from developing, while providing less aggressive or objectionable competition to existing providers or insurers. Kissam (1978) and Havighurst (1978) have suggested that open-panel HMOs with direct or indirect ties to medical societies may initially set low premiums and market aggressively to prevent the growth of independent, closed-panel HMOs. Luft (1981) suggests that "The mere existence of a defensive plan, however, does not preclude a competitive market environment. A defensive plan which cannot control utilization of services is unlikely to succeed on a long-term basis, . . . " (p. 425). In the short run, defensive HMOs may offer an effective strategy for organized medicine and traditional insurers who are interested in preventing the development of independent and competing HMOs.

Summary. There appear to be many situations where professional control over aspects of the market for health services have affected the nature and extent of competition in this market. Regulatory, legislative, and judicial actions have reduced the amount of direct and overt action taken by organized medicine to prevent the development of new insurance practices and alternative delivery systems, but the complex nature of medical care requires that providers be involved in or consulted on nearly all aspects of medical practice. Consequently, the opportunities for professional control of the market for health insurance remain substantial.

Consumer information and choices: Since over 80 percent of hospital insurance is provided under group policies (HIAA, 1981), a substantial portion of the insurance market requires minimal information search by consumers. The major consequences of the presence of substantial employment-based insurance in this market are that:

1. Many consumers have limited choices of insurer, benefits, and copayment requirements.
2. Well-informed employers or their representatives choose from among a variety of alternative policies those which will be offered to employees.

Thus, as Frech and Ginsburg (1978) suggest, the market for health insurance is dominated by informed buyers, and competition among insurers to obtain business from these informed buyers is intense. According to Robbins (1978) ". . . well over 90 percent of a given company's newly acquired group insurance business represented the transfer or 'taking' over of a group case from a competitor" (p. 264).

Even if the market for health insurance is dominated by informed buyers,[16] it is not necessarily the case that barriers to *consumer* choice do not exist. The employer offers to the employee only a limited set of health insurance plans—in many cases, only one—with seldom more than three of four plans made available. The employees' choices are constrained to this set of plans and, therefore, individual preferences may not be satisfied.[17] The implication of this limitation for consumers is clear: to the extent that consumers do not directly negotiate their own preferred insurance coverage, they are less well-off. On the other hand, the implications for the functioning of the market for health insurance are also clear: informed buyers of insurance are able to obtain the "best" buy available for employees, and insurers are forced to become quite competitive in premiums, benefits, and claims handling. The trade-off between the loss in consumer welfare, due to less direct involvement in choosing the terms of insurance, and the gain in efficiency, due to the competitive pressures in this market, has not been examined.

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[16] Sapolsky *et al.* (1981) suggest that employers who are large purchasers of health insurance are *not*, in all cases, well-informed buyers.

[17] However, employees can choose to purchase supplemental individual health insurance coverage. In addition, any employee can "choose" coverage jointly with the decision to accept employment (Goldstein and Pauly, 1974).

Open enrollment options offer employees the chance to change their insurance plans at periodic intervals (at least in firms which offer more than one option). Employers may provide comparative information on the alternatives available in order to assist the consumer to make such choices. A number of studies have been conducted on the issue of consumer choices when offered periodic opportunities to switch plans. The Federal Employees Health Benefits Program (FEHBP) was among the first employment-based health insurance programs to offer insurance options and periodic open enrollments. A study of initial and subsequent choices among these plans, during the 1960 - 1969 period, revealed that employees evidenced an increasing preference for "High Option" (more comprehensive) plans, and that employees shifted toward service benefit plans and prepaid plans (Anderson and May, 1971). A Council on Wage and Price Stability report (1976) documents that when employees in one area were first offered options and open enrollment periods, there was initially little shifting among plans. Over time, however, substantial employee movement to preferred plans was observed. This movement appeared to be related to changes in premium cost and benefit packages. Enthoven's (1978) study of the California State Public Employees' System found considerable evidence that consumers choose among alternatives to satisfy individual preferences. Berki *et al.* (1977) report that these choices appear to be made on the basis of financial vulnerability, as well as preferences regarding providers and styles of care. The evidence on consumer information and consumer choices, in sum, suggests that, as consumers become more familiar with the options available, they become more likely to choose rationally among insurance plans offered.

Adverse selection: Competition among health insurers and delivery systems requires that consumers have adequate information and be able to choose among alternative plans. Insurers seldom have adequate knowledge of the consumer's health status and health behaviors. At the same time, health insurance premiums are set on the basis of average experience of the relevant community or employment group. If consumers have substantial knowledge of their intended utilization of health services *and* have several insurance plan options available, they will seek to identify and join the plan which offers the benefits they plan to use, at the lowest premium. The premium, however, is based on average utilization; the insurer will lose money if a substantial number of heavy users join the plan. This phenomenon is referred to as "adverse selection"[18] and is a topic of considerable importance to the debate on competitive proposals. Adverse selection is a potentially negative side effect of competition. Consumer self selection in multiple choice situations may lead to high-risk populations being concentrated in the most expensive plans, defeating the purpose of insurance as a risk-spreading device. In addition, insurers may suffer short-term financial losses due to adverse selection.

Several studies of the characteristics of individuals who choose to enroll in HMOs and those who choose traditional insurance have yielded inconclusive evidence on the issue of adverse selection. Tessler and Mechanic (1975) examined the self-reported health status of individuals who choose an HMO and those who choose traditional insurance in a dual choice situation. They report that enrollees in the HMO were comparable to the group choosing traditional insurance on a number of dimensions of health status. However, the HMO enrollees tended to report more chronic conditions than did those choosing traditional insurance. The authors emphasize that their findings are of only limited generalizability and suggest that any conclusions on the issue of selection should be made on the basis of cumulative experience in varying social settings.

Bice (1975) uses data from a prospective study of enrollment in an HMO to examine the relationship between health status and HMO enrollment. Measures of health status examined include a checklist of chronic conditional and symptoms of the enrollee and family members, self-reported health status, recent hopsitalization experience, and the previous number of physician visits per family member. His results indicate that health status indicators, alone, are poor predictors of enrollment in an HMO. However, when economic factors are also taken into account, a relationship between health status and HMO enrollment is observed. Families which anticipate substantial (relative to their income) out-of-pocket health expenses are more likely to choose to enroll in an HMO. These findings suggest that, for lower income groups with large anticipated health expenditures, the possibility of adverse selection may be present.

Findings by Gaus *et al.* (1976) tend to contradict the results reported by Tessler and Mechanic and by Bice. They examined differences between self-report-

[18] When HMOs or traditional insurers select more healthy members and leave the sick to other insurers, adverse selection is also present. This form of adverse selection is sometimes referred to as "preferred risk selection."

ed health status of Medicaid recipients who chose to enroll in an HMO and thos who remained in the fee-for-service system, and found no signficant differences. However, the fact that the study was limited to the Medicaid population, which is not at risk for out-of-pocket costs under either alternative, makes it unlikely that any adverse selection based on economic considerations would be observed.

Berki *et al.* (1977) and Scitovsky *et al.* (1978) have also examined the relationship between health status and choice of health plan. Scitovsky *et al.* use self-reported health status and whether the individual had a serious health problem during the preceding year as measures of health status. They report that, while some differences were observed in health status by plan choice, these differences were not highly significant. They conclude that, for the two plans examined, there appeared to be no selectivity by health status. Berki *et al.* analyze the enrollment decisions of individuals in a quadruple-choice situation. Measures of health status of members of the group included self-reported health status, disability and hospital days during the first year in the chosen plan, past hospital episodes, in-plan out-of-pocket costs, illness-related physician visits and total ambulatory visits per family member during the previous six months in the plan chosen. The authors report that they found no adverse health risk self-selection in an employed population for which total premium cost was paid by the employer.

There is some preliminary additional evidence showing that adverse selection may occur in multiple choice situations. Lewis (1969) describes a program in Oregon which provides vouchers which can be used by the poor to purchase health insurance. Some of the insurers in this program have experienced adverse selection resulting in hospitalization rates 6–10 times that experienced by other HMOs. Luft (1980) suggests also that adverse selection may explain the rapid rise in Blue Cross premiums for University of California employees relative to that experienced by Stanford employees.

The evidence on the existence and the magnitude of the adverse selection problem is, at present, only preliminary. The potential for adverse selection, when multiple choices are offered to consumers, is present, however, and additional information on this issue would be useful for policy formulation purposes.

Summary: There are present in the market for traditional health insurance and HMOs a number of conditions which create barriers to competition: (1) legal restraints, including government regulation and health planning laws; (2) professional restraints on competition, including professional dominance of traditional insurance plans and anticompetitive actions affecting HMOs; and (3) limits to consumer choices among insurance plans. The net effect of these barriers to competition have not been examined. Indeed, in the economic literature, much more attention has been directed toward the impact of insurance on the market for health services than toward the performance of the insurance market. The evidence on competition in this market leads to a conclusion that it is a relatively competitive market:

- *Entry:* There is evidence that entry is relatively easy in this market. Over 50 new firms entered the commercial market between 1958 and 1973 (Frech and Ginsburg, 1978). HMOs increased from 142 plans in 1974 to 236 plans in 1980 (Luft, 1981).
- *Information:* Group insurance may be associated with the development over time of greater sophistication of some corporate purchasers of insurance, and individuals appear to have adequate information to make rational choices among a limited set of available alternatives.
- *Concentration:* If the Blue plans are viewed as a single nationwide organization, then there is clearly a high degree of concentration in this industry. If they are regarded as separate plans, then there is a moderate degree of concentration which varies by locale and region (Woodward, 1978).
- *Monopoly power:* The negative effects of concentration on the buyer side may be partly offset by the presence of some monopsonistic[19] power for large firms which negotiate group contracts for their employees.

Price competition

Since the evidence presented in the preceding sections suggests that barriers to competition are not as great in the market for health insurance as has been observed in the market for health services. Consequently, it may be expected that more price competition may be observed to be present in this market. The evidence on price competition and its effects within the market for health insurance is examined in this section.

Traditional insurers vs. traditional insurers: The market for traditional insurance and fee-for-service health care delivery is divided nearly equally between the nonprofit Blue Cross and Blue Shield plans and commercial insurance firms (some of which are also nonprofits). As has been discussed above in some detail, the Blue plans have a competitive advantage due to several factors: (1) they are exempt from certain taxes as nonprofit organizations; (2) required reserves are lower in most states for Blue Plans; and (3) most Blue Cross plans pay a lower price for hospital services than do commercial insurers. As a result of these cost advantages, the Blue plans can offer premiums for comparable benefits at lower prices than can commercial insurers which have higher costs.

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[19] In this case, there are few buyers in the market which creates a situation where buyers may have some ability to affect the market price of the goods or services offered.

The Blue Cross hospital price differential may be as much as 14 to 30 percent of hospital charges (Robbins, 1978). The impact of this is two-fold: (1) Blue Cross can offer hospital insurance at lower rates than commercial insurers; and (2) commercial insurers pay higher hospital prices to compensate for the underpayment of Blue Cross, which further increases the price of hospital insurance offered by commercials. Feldman and Greenberg (1981) examine the relationship between Blue Cross market share and the Blue Cross "discount" on hospital charges. They find evidence that the Blue Cross market share may be increased by the existence of the price differential. This evidence suggests that the Blue plans compete on the basis of price, where they hold an advantage in costs over commercial insurers.

The various cost advantages enjoyed by the Blue plans could conceivably be used by the plans to gain a substantial or complete monopoly. Frech and Ginsburg (1978) suggest that this does not occur because Blue Cross and Blue Shield plans are ideologically committed to complete insurance. They, therefore, use their cost advantages to offer more benefits for the same premiums offered by commercial insurers, rather than offering lower premiums for the same benefits. The Blue plans, in effect, refuse to compete with commercial plans which offer policies with limited benefits and/or high copayments.

Another explanation offered by Frech and Ginsburg (1978) for the failure of the Blue plans to fully exploit their price advantage is that they choose to operate less efficiently than commercial insurers. Commercial insurers, at a cost disadvantage, face strong incentives to operate efficiently in order to minimize costs and be able to compete with the Blues on price. The evidence that Blue Cross and Blue Shield plans are administratively inefficient is relatively weak, however, as has been discussed in some detail in earlier sections of this chapter.

Traditional insurers vs. HMOs: The price competition between traditional insurers and HMOs reflects differences in comprehensiveness of the benefits offered, in addition to price differentials. Traditional insurance plans usually do not offer complete coverage for all included benefits, but they do offer free choice of provider on a continuing basis. HMOs offer services, require little or no out-of-pocket cost, and eliminate consumer time spent in filing claims.

Comparisons of price between HMOs and the traditional insurance/fee-for-service system (Luft, 1978; Wersinger and Sorenson, 1980) indicate that the total cost of medical care (premium plus out-of-pocket expense) for HMO enrollees is lower than for comparable people with traditional insurance coverage. This differential ranges from 0 to 40 percent depending upon the type of HMO being studied. This total cost differential does not appear to be due to greater efficiency in production of services; but is apparently due to differences in utilization of medical care, particularly hospital services (Luft, 1980).

The cost savings generated within the HMO delivery system structure are reflected in premiums. HMOs typically offer more comprehensive coverage for about the same premium as traditional insurance plans. Luft (1981) states "although HMO premiums used to be somewhat higher, in many instances they are now even lower than conventional plans" (p. 5.2). Evidence on this issue is very consistent across all studies of HMO and traditional insurance premiums.

Given that HMOs offer comprehensive services with little or no out-of-pocket costs and for a premium that is as low or lower than traditional comprehensive coverage (which is associated with fewer benefits and higher out-of-pocket expenses), why don't HMOs dominate the market? In part this can be attributed to the comprehensiveness of the benefits offered. Individuals in low risk categories, who expect to utilize few health services, may prefer to pay a lower premium for less comprehensive health insurance coverage which includes deductibles and coinsurance requirements. On the other hand, those people who expect to incur substantial numbers of ambulatory care visits (e.g., families with several young children) or who have chronic conditions requiring continuing treatment, or who expect to utilize maternity benefits, may prefer the HMO option over comprehensive traditional insurance which offers less generous benefits for ambulatory care and maternity expenses.

The ability of HMOs to offer competitively priced premiums is affected by several regulatory constraints on their behavior, as has been discussed above. The Health Maintenance Organization Act of 1973, amended in 1976, requires that HMOs offer a much more comprehensive set of benefits than do most traditional insurance plans; it also requires community rating. These provisions are cost-increasing and reduce the ability of HMOs to offer alternative packages of benefits and premiums, depending upon group characteristics and experience.

The competitive impact of HMOs on the traditional insurance/fee-for-service delivery system has been investigated by several researchers. Most of the evidence suggests that the primary outcome of competition between HMOs and traditional insurers has been an expansion of benefits covered by traditional insurers (Goldberg and Greenberg, 1977). Some fee-for-service providers have responded by forming competing HMOs of the individual practice association (IPA) type (Christianson and McClure, 1979). In areas where HMOs have a large market share, lower use of hospital services has been observed (Goldberg and Greenberg, 1977; Chiswick 1976). These findings have not been supported by other data, however (Luft, 1980).

At present, there are some studies, but little firm evidence, on the outcome of price competition between HMOs and traditional insurers. Overall, it appears that HMOs and traditional insurance/fee-for-service delivery systems do compete on price—although the products each offers are not identical.

HMO vs. HMO: As has been discussed in earlier sections of this chapter, there are several types of HMOs. The most general distinction is between:

- Prepaid Group Practice (PGP) HMOs which pay physicians on a salary or capitation basis; and
- Individual Practice Association (IPA) HMOs which reimburse physicians on a fee-for-service basis.

Competition among HMOs is most evident for these two types of HMOs, since the structure and incentives differ substantially between them.

Total costs of enrollees in PGPs tend to be substantially lower than those incurred by enrollees in IPAs. Lower rates of hospital usage of approximately 35 percent are reported for PGP enrollees compared with 5 to 25 percent lower rates for IPA enrollees. Enrollees in IPAs have substantially more ambulatory care visits than do PGP enrollees. These factors suggest that premiums for IPAs will be higher than premiums of PGPs, for identical benefits. However, some enrollees with preferences for a particular physician may choose an IPA for that reason, even when benefits are lower or out-of-pocket costs are higher. Other factors, such as geographic location, may also influence choice of plan. The IPA form of HMO is generally used by fee-for-service physicians to compete with HMOs; in some cases, IPAs have been established as an anti-competitive response to prevent PGPs from gaining a share of the local market (Kissam, 1978; Havighurst, 1970). There are substantial differences between these forms of HMOs, and these differences create price differentials which may form the basis for competitive pricing of premiums.

Summary: Price competition exists in the health insurance market, among all types of insurers and delivery systems. Detailed information on the nature and extent of price competition is not widely available. However, there appears to be a wide variety of plans available, and considerable attention to pricing of premiums, within this market. The fact that informed buyers of group policies are a major factor in this market may create additional incentives to price competition among traditional insurers and HMOs.

Nonprice competition

The traditional insurance/fee-for-service delivery system and the HMO offer products which differ along many dimensions. Therefore, in addition to price, competition may occur among insurers on the basis of other factors. Within the traditional insurance/fee-for-service market, for example, plans might differ with respect to how quickly they handle claims; consumers might take into account this promptness of payments in determining which insurer to choose.[20] Other key nonprice differences between traditional insurance/fee-for-service delivery and HMOs include: (1) comprehensiveness of benefits; (2) quality of care; (3) access to care; and (4) amenities. The major evidence on these issues is based on subjective impressions of consumers.

Comprehensiveness of benefits: HMOs, especially federally qualified ones, tend to offer a more complete range of services than are generally covered by traditional insurance. Complete ambulatory care, maternity care, mental health/drug abuse services, preventive care, and other benefits are available to HMO enrollees, but are covered less completely by traditional insurers. A major advantage of an HMO is this comprehensiveness of benefits. Surveys of HMO enrollees indicate that the scope of benefits available is one of the most attractive aspects of HMOs (Luft, 1981; Tessler and Mechanic, 1975).

Quality of care: Studies of comparable quality of care between HMOs and the fee-for-service delivery system suggest that HMOs provide approximately similar, or slightly higher, quality of care (Luft, 1981). HMOs have relatively high proportions of board-certified physicians, and are more likely to make use of accredited hospitals than are fee-for-service physicians. HMOs also emphasize formal quality review and assessment activities for ambulatory and hospital care. Outcome measures (e.g., prematurity rates, infant mortality rates, disability days) have not demonstrated any clear quality differences in care provided by HMOs and fee-for-service practice.

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[20] No evidence was found on this issue in the literature.

Two studies of consumer satisfaction with quality of care produced findings that HMO enrollees were more negative about the quality of care they received than were patients of fee-for-service physicians (Louis Harris and Associates, 1980; Luft, 1981). It is uncertain which characteristics of medical practice consumers evaluate as indicators of quality of care. However, if *perceived* quality is lower, this suggests that fee-for-service practitioners may have a competitive advantage over HMOs on this issue, even though HMO enrollees' *perceptions* of quality of care may differ from objective measures of qualitative differences.

Access to care: One attraction of the HMO for some consumers may be the closed-panel, comprehensive care concept offered. It has been found that individuals who have just moved to a new community, or who have no regular or family physician, are more likely to join an HMO (Tessler and Mechanic, 1975). The difficulty of finding a primary care physician, and a variety of specialists needed on a regular basis, can be overcome by joining an HMO. Thus, some individuals may join an HMO in order to avoid searching for fee-for-service physicians, and to be guaranteed immediate access to the full range of medical services required.

Other measures of access to care are: (1) waiting time for appointments; and (2) waiting time in the doctor's office. Luft (1981) states that there is substantial evidence that enrollees in PGPs wait a shorter time in the physician's office, but a longer time for appointments. Held and Reinhardt (1980) find that among group practices, there is no difference between the time to obtain an appointment for prepaid and fee-for-service groups, but did not compare group practices with fee-for-service solo practitioners. Other measures of access (e.g., home visits, ability to reach a physician by telephone) have been investigated, but the findings do not discriminate between HMOs and fee-for-service systems on these dimensions (Luft, 1981).

Amenities: Consumers frequently are willing to pay more for a service when it is accompanied by other characteristics which are perceived as desirable. In medical care, physical surroundings in which care is provided; continuity of care, the physician-patient relationship and other factors are amenities to which consumers may assign values. Continuity of care also may be a major issue for enrollees in HMOs since the physician seen will ordinarily vary across visits. In fee-for-service delivery systems, the personal relationship between the physician and patient may be an important aspect of the care received. Indeed, individuals who join HMOs are unlikely to have an existing physician-patient relationship, possibly because they place a low value on a close physician relationship. For most consumers, however, it seems likely that continuity of care is a positive amenity associated with fee-for-service practice.

The quality of the physician-patient contact may also be a factor in consumer's choices between HMO and fee-for-service practice. *Humaneness* of the physician-patient contact has been examined by several studies. Luft (1981) reports that PGP patients were less satisfied with the attention, warmth, and caring attitudes shown by physicians than are the patients of fee-for-service physicians.

Summary: There is clear product differentiation between traditional insurance/fee-for-service delivery and HMOs. Non-price competition between these insurance plans focuses on such elements as comprehensiveness of benefits, quality of care, access to care, and such amenities as the quality of the physician-patient relationship. The impact of non-price competition on the market for health insurance has not been studied extensively, even though it remains a major issue in this market.

Summary

The market for health insurance exhibits a number of characteristics which present barriers to its ability to function as an economic market. These barriers include:

- Legal restraints such as state regulation of the insurance industry, federal regulation of HMOs, and certificate-of-need requirements in health planning laws;
- Professional control of the insurance industry through boards of directors and through collective anticompetitive actions which have restrained growth of HMOs; and
- Limits on consumers' abilities to freely choose among insurance plans/delivery systems.

Despite these barriers to competition, there appears to be relatively free entry into the industry, at least some well-informed purchasers of insurance, and only a moderate degree of concentration in the industry.

Fairly vigorous competition appears to be present in this market. Cost consciousness is apparent and price competition among firms is evident. This may be, in part, attributable to the presence of buyers of insurance who are well-informed and who represent large groups of consumers. Despite certain regulatory cost advantages enjoyed by nonprofit traditional insurers, there is no evidence that market share is increasing or that these insurers are fully exploiting this pricing advantage.

Substantial product differentiation exists in the market for health insurance. The traditional insurance/fee-for-service delivery system offers different conditions and amenities than does the HMO alternative. As a result, there is also a degree of nonprice competition in this market. The importance of nonprice elements, relative to price differentials, however, has not yet been investigated in a comprehensive manner.

Evidence on competition in other markets for health services

Introduction

In the preceding chapters, evidence on competition and its effects on the markets for hospital services, physicians' services, dentists' services, and health insurance has been reviewed. The emphasis placed on these markets reflects the emphasis which has been found in the current literature. The availability of adequate data has influenced the attention directed by researchers toward these markets. There are, however, a number of other health services markets which are of substantial importance to current policy development. The fact that less research has been conducted on issues affecting these markets means that there is less evidence available on the nature and extent of competition in these markets, and suggests that there is a potentially greater need for more research on these issues. In this chapter, the evidence on market structure, barriers to competition, price competition, and nonprice competition is briefly summarized on the markets for:

- Clinical laboratory services;
- Other professionals' services;
- Nursing home services; and
- Pharmaceuticals.

The market for laboratory services

Clinical laboratories provide services for the detection, diagnosis, and treatment of illness. Approximately five billion laboratory tests per year were performed by the late 1970s at a cost of more than $12 billion, about 10 percent of U.S. total expenditures on health services (U.S. DHEW, 1979) Hospital-based laboratories perform the majority of laboratory tests in conjunction with hospital impatient and outpatient services. However, a substantial amount of testing is performed by local or chain-operated independent laboratories.

Growth in the volume of laboratory services has been dramatic during the past decade. The number of trained medical laboratory personnel employed more than doubled between 1970 and 1976 (U.S. DHEW, 1979). The number of tests performed by independent laboratories grew from 812 million in 1970 to 1,694 million in 1978; tests performed in hospital laboratories increased from 1,532 million to 4,038 million over the same period (Munch, 1980).

Rapid growth in laboratory testing has been attributed to several causes:

1. Development of testing for a greater variety of diagnostic and treatment purposes;
2. Third-party reimbursement for nearly all hospital-based testing and for substantial amounts[1] of outpatient testing;
3. Technological innovations which permit testing to become more capital-intensive and less costly per unit; and
4. The practice of defensive medicine by physicians following substantial increases in malpractice suits and levels of malpractice insurance premiums.[2]

With this rapid expansion of the market and changing technologies, there have been alterations in the structure of the industry in recent years. There are, in addition, barriers to competition which substantially affect the performance of this market.

Market structure and barriers to competition: The demand for laboratory tests is a derived one. Patients delegate to a physician the power to decide whether

[1] Munch (1980) reports that the percent of the population with some private insurance coverage for outpatient laboratory tests and X-rays increased from 41 percent in 1965 to 74 percent in 1975.

[2] Langwell and Werner (1981) find that over 35 percent of all U.S. physicians have increased the number of laboratory tests they order, due to professional liability consideration. For some specialties (e.g. surgeons and obstetricians), up to 50 percent report increased testing.

and what type of laboratory tests are to be performed. Bailey (1977) suggests that once the physician has ordered a test, the patient risks losing the "prior investment" in the physician visit if he or she chooses not to have the testing done. In addition, the physician may suggest or direct the patient to a particular laboratory with which the physician has a billing arrangement. As a result, the patient seldom has prior knowledge of the price of laboratory tests, nor is the patient likely to comparison-shop among laboratories. The presence of insurance in this market reduces even further the consumer's price sensitivity and shopping behavior. Patients who are hospitalized have literally no ability to choose the provider of laboratory services since the hospital conducts all testing in-house.

The lack of consumer direct demand for laboratory services has created an industry with substantial provider domination of services and price. In the past, most clinical laboratories have been small firms, serving a relatively limited local market, and frequently owned and managed by pathologists who may also be associated with a local hospital. Because of their ties to the medical community, pathologists may have enjoyed a competitive advantage over independent laboratories not owned or operated by physicians. However, laboratories owned and operated by nonphysician personnel are not uncommon. In addition, the development of automated technologies for processing and analyzing data has attracted new firms to the industry, particularly established drug and chemical companies which moved into this market by acquiring laboratories rather than forming new firms. Large corporate-owned laboratories are most often engaged in providing high-volume automated testing services where fast interpretation of results is not essential. Some are "mail order" firms which have established a national business conducted from one location.

Bailey (1977) reports that since 1965, three of the five largest laboratories on the West Coast (accounting for 45 percent of laboratory test volume in the region) have been acquired by pharmaceutical firms. The remaining two laboratories have been purchased by large chemical firms. Bailey suggests that the development of corporate-owned chains of clinical laboratories may indicate that the industry is evolving toward an oligopolistic structure. One reason for this move toward corporate acquisition is that with the development of automated testing, large sums of capital are needed to finance new and expanded plants and equipment. Small owner-operated laboratories find it difficult to remain price-competitive since they are unable to obtain the necessary volume of business to justify purchase of newer technologies.

Technological innovation, then, has created new barriers to entry in this industry in recent years. Other barriers to competition exist. As Bailey (1977) and Munch (1980) discuss, pathologist domination of the market in past years resulted in substantial anticompetitive behavior. The provision of laboratory tests was viewed by pathologists as a professional service, to be performed and interpreted by the pathologist, and, therefore, the practice of medicine and subject to the established rules of medical ethics. As a result, advertising of laboratory services and prices was prohibited under the code of medical ethics. In addition, pathologists exerted substantial power over the pricing of laboratory services. This was curtailed in 1969 by a consent decree entered between the Department of Justice and the College of American Pathologists which barred pathologists from preventing independent pricing of tests by laboratories and from suggesting uniform fee schedules.

At the state level, legislation directed toward the staffing and personnel of medical laboratories also impedes competition in this market. White (1978) reports that, in 1972, five States and New York City required that nonsupervisory personnel be licensed.[3] Two states established standards which eliminated mid-level workers (less than a college degree) from employment in laboratories. Analysis of the impact of these licensure laws on the market results in a finding that the most stringent laws increased relative wages of laboratory technologists by 16 percent and increased the overall wage bill in laboratories.

In 1976, six states had legislation requiring the licensing of laboratory directors. However, rulings at the State judicial level that laboratory services are not considered the practice of medicine have permitted the growth of independent laboratories not owned and operated by physicians. Munch (1980) suggests that this reduction in legal barriers to entry have been offset somewhat by licensure and quality control regulations. She concludes, however, that overall the trend has been toward removal of institutional obstacles to competition and toward reduction in the cost of tests to physicians. Bailey (1977), on the other hand, suggests that the market power of large corporate laboratories may be growing to the point that "competition may again be thwarted (p.129)." While pathologists' domination of the market lead to high prices and lower volume, Bailey expects that corporate monopoly power results in lower prices but strong pressure for greater test quantities.

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[3] By 1979, 12 states had enacted enabling legislation for the licensure of laboratory technologists and 2 states had legislation for licensure of technicians (U.S. DHEW, 1979).

Price competition: Empirical evidence on price competition in the market for labortory services is slight; there are few available data sources to permit research on this issue to be conducted. Munch (1980) was able to obtain 1975 price data only for the usual charge for a complete blood count (CBC) for a sample of 202 physicians in five specialties. She reports that high industry concentration in a geographic region is associated with higher prices for lab tests and lower volume of tests. These results would suggest that if the tendency in this market is toward an oligopolistic structure, as Bailey (1977) suggests, price competition will be reduced.

Bailey (1977) indicates on the basis of anecdotal evidence that price competition has been substantial in this market, especially in conjunction with technological changes. Automation of many aspects of laboratory testing has caused prices to decline and resulted in large firms with investment capital entering the industry. Price competition may be a transitional phenomena associated with the introduction of cost-saving technology, however, since small owner-operated labs may be forced to leave the industry when they are unable to compete with larger automated firms. No firm evidence on this point is currently available.

Nonprice competition: Empirical evidence on nonprice competition in the provision of laboratory services is lacking. Bailey (1977) suggests that nonphysician-owned independent laboratories competed for business that pathologists were less interested in. In addition, they sought to provide more conveniently offered services to the private practice physician (e.g., locale, rapid reporting of results, flexibility of financing arrangements). Corporate-owned laboratories may also differentiate their products, specializing in high-volume automated tests. In addition, Bailey suggests that these labs may offer economic advantages to private physicians which create incentives to use corporate-owned services. Although no firm evidence is available, it appears that the market for laboratory services consists of three major groups which may differentiate their products in order to maintain a share of the market.

The markets for other professionals' services

Health services are provided by a large number of health professional groups. Physicians and dentists are the two occupations which require the most extensive training and which dominate the market for health services. The majority of medical services are provided to patients at the direction of physicians; similarly, dentists are responsible for the provision of most dental care, either directly or indirectly. Because of the central role of physicians and dentists in the market for health services, these occupations have been examined in detail in Chapters 4 and 5 above. There are, however, many other health professions which provide health services and which either compete with physicians or dentists or provide complementary services. In the former category are such professions as psychologists, optometrists, podiatrists, and chiropractors. Complementary personnel include nurses, physical therapists, laboratory technologists, respiratory therapists, dental hygienists, pharmacists and others.[4] Some occupations may be either competing or complementary depending upon local legal standards. Denturists, for example, may be limited to constructing dentures at the dentist's prescription or may function independently providing dentures directly to consumers. Certified nurse midwives may be employed as part of a physician-directed team or may practice midwifery independently (maintaining a consultative and referral relationship with a physician). In many states, legal barriers to competition exist for those occupations which have the training and expertise to provide some range of competing services. As a result, the extent of competition among professionals in the health services market is limited. In addition, the market is dominated by the major professions and legal and institutional factors have, consequently, favored the continuation of this dominance.

Market structure and barriers to competition: Health professions which are potential substitutes for physicians and dentists are those which provide services to patients and bill the patient directly for services. Barriers to competition by these professions are of two major types: (1) legal barriers (e.g., State Medical Practice Acts); and (2) anticompetitive actions by the dominant professional groups.

State medical and dental practice acts and licensure laws establish the standards by which medical and dental practice may be conducted in each state. It has been argued by a number of researchers that these laws erect barriers to competition by potential substitutes for physicians and dentists (P. Feldstein, 1977; Kessel, 1970; Kissam, 1981). The most common forms of anticompetitive legal restraint on competition are state medical and dental practice acts which include provisions which severely restrict the conditions under which nonphysician and nondentist personnel are permitted to perform their functions. Often, these statutes give control over practice standards for health professionals to state medical and dental boards. Consequently, the development of liberalized practice rules for these professionals is hindered (P. Feldstein, 1977). One result of the influence of physician and dentist organizations is that professions which potentially might compete with these dominant professions often are legally transformed into complements rather than substitutes by state legislation. This type of legislation either makes it illegal for anyone, other than a physician or dentist, to perform certain tasks, or requires that whoever performs these tasks must be under the supervision of a dentist or physician (P. Feldstein, 1977). These legal restraints on practice by potentially competing health professions are established ostensibly for reasons of assuring the quality of medical and dental services offered to consumers (Pollard and Leibenluft, 1981). Licensing of professionals is very common in the market for health services and is based upon a rationale that: "licensing can be expected when the variance in the quality of the service furnished by the practitioner is high, when the importance of that variance is great, when the amount of training necessary to evaluate the service is large, and when the degree of exposure of the consumer to the practitioner is small (Moore, 1961, p. 106). For medical services, and to a lesser extent dental services, these conditions are evident in the market for health services, and may explain the emphasis on licensure in this field. Pollard and Leibenluft (1981) describe the anticompetitive effects of licensure as including: (1) the tendency to include irrelevant criteria in the standards (e.g., age or citizenship); (2) the impediment that licensure places on innovation in practice; and (3) limitations placed on consumer choices. They note, however, that state licensure laws and medical practice acts are protected under the state action doctrine which provides that private conduct is not subject to federal antitrust laws if a state legislature has taken the steps necessary to immunize the conduct from scrutiny. Thus, the anticompetitive nature of many state laws are not subject to remedy by federal action.

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[4] There are many health professions, requiring widely varying levels of training. In this section, only those professions which have clearly defined educational and licensure/credentialing standards are considered.

Professional society activities which create barriers to competition *are* subject to federal antitrust laws since the 1975 Supreme Court decision on *Goldfarb vs. Virginia State Bar.* Professional society activities which are of potentially greatest concern with respect to competition among health professions include (1) information dissemination aimed at coordinating anticompetitive behavior (e.g., boycotts, refusal to deal); (2) certification and accreditation of related professions, training institutions, and health facilities which may be designed to restrict competition; (3) disciplinary actions against members who participate in innovative approaches to health care delivery by nonphysician providers or alternative facilities; and (4) the granting and denying of hospital admitting privileges.

The latter issue, especially, has the potential to restrain competition by highly trained potential physician substitutes such as psychologists, podiatrists, and certified nurse midwives (Pollard and Leibenluft, 1981). These professionals are generally not permitted to have full admitting priviledges to hospitals but, instead, must seek medical staff member concurrence with admitting, treatment, or discharge of patients. The consequence of these limits on nonphysician providers' hospital privileges is that physicians have exceptional market power for services rendered in the hospital setting. In the past, this power has been used by organized medicine to restrain the development of the osteopathic profession and to prevent the growth of Health Maintenance Organizations. Both competing organizations have responded by developing their own independent hospital systems (P. Feldstein, 1977). Pollard and Leibenluft (1981) suggest "Perhaps the most serious harm to consumers is the restriction on the range of available choices resulting from the denial of a grant of privileges. Not only may patients lose services of the physicians whom they prefer, but also they may be denied access to nonphysician providers. Such practitioners may be able to furnish services at lower costs, and, in rural and underserved areas, may be the only available and affordable means for obtaining care" (p. 101).

Competition in markets for other professionals' services: Although there are many health professions which potentially could compete with physicians and dentists, the presence of legal and institutional barriers to direct competition constrains these professionals from full participation in the market. Consequently, attention in this section is focused only on those professions with the ability to provide services directly to consumers in at least some states, and who also have the legal right to bill patients directly for those services. These professions include:[5]

- Psychologists and psychiatric social workers;
- Optometrists;
- Podiatrists; and
- Chiropractors.

Other professions may have equivalent competitive impacts; however, the extremely limited data and research findings available means that the professions for which there is empirical evidence on competition are few. This evidence is summarized briefly here.

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[5] Osteopaths have traditionally provided the major competition facing medical doctors; at this time, however, they have been substantially accepted by the medical profession and are not viewed by most as distinguishable, educationally or in practice, from the larger medical profession. Therefore, they have not been included among the competing professions examined in this section.

- *Psychologists and psychiatric social workers:* McGuire (1980) states that "Mental health services is the health setting in which interprofessional competition is fully played out" (p. 198). The reason for this, he suggests, is that: (1) clinical psychologists are a credible substitute for a type of physician over a broad range of functions; and (2) clinical psychologists are numerous, politically conscious and active, and have been successfully fighting to expand the scope of their practice for 20 years. Empirical evidence on the substitutability of psychiatrists and clinical psychologists is available (McGuire, 1980). These findings indicate that there is substantial substitutability possible. In addition, McGuire cites evidence that suggests that psychologists provide the service at less cost and use fewer hospital services. Full substitutability is not possible, however, since some mental illness may require medical treatment which can be provided only by a physician or under the direction of a physician. In addition, the widespread use of drug therapy for mental illness requires physician involvement in treatment regimes (Pollard and Leibenluft, 1981). McGuire (1980) reviews the regulation of the market for psychotherapy services and points out that, in 15 states, psychologists are required to practice in a consultative relationship with a physician. Twenty-eight states have "freedom-of-choice" laws which require insurers to reimburse psychologists directly and independently of a physician. Stone *et al.* (1979) report that Blue Shield plans have resisted making direct payments to psychologists in nine of the 28 states with "freedom-of-choice" laws. Recent court rulings have resulted in the decision that refusal to permit direct billings by psychologists is restraint of trade and should not be permitted. In summary, the evidence available suggests that, for a broad range of services, psychologists and psychiatrists are in direct competition. Barriers to such competition are being reduced and, in the future, increased competition in this market may be expected to cause real prices to fall, and the quantity of services available to grow.

- *Optometrists:* The optometry market has received considerable attention by researchers. However, this attention has been narrowly focused on the economic effects of advertising bans and licensing restrictions. There are two primary reasons for this: (1) there is a great deal of variability in advertising restrictions affecting eyeglasses and eye examinations; and (2) quality of service is more easily measured in this market than in other services. Optometrists can perform eye examinations and dispense eyeglasses and contact lenses. Opthalmologists are physicians who perform eye examinations, but usually do not dispense glasses or contact lenses; patients of opthalmologists usually purchase their lenses from opticians. Thus, optometrists and opthalmologists are substitutes for one another, at least for eye examinations. Optometrists are at present pursuing the right to use pharmaceutical agents for therapeutic and diagnostic purposes while opthalmologists have resisted such "encroachment" (Begun and Feldman, 1981). To date, state medical practice acts have not substantially eliminated the overlap between optometrists and opthalmological physicians. However, advertising bans have been generally incorporated into the licensing rules governing these professions. Studies of the effects of such bans indicate that eyeglass prices are higher in states with more restrictive regulations regarding advertising by optometrists (Benham, 1972). In a more recent study, Benham and Benham (1975) find that such restrictions also result in lower utilization of optometric services. Neither of these studies controlled for quality of service. However, even after controls for quality of service are introduced, prices for optometric services are generally found to be higher where advertising is restricted (Begun and Feldman, 1978; Begun, 1981; Bond *et al.*, 1980).

- *Podiatrists:* Podiatry today is defined as "that profession of the health sciences which deals with the examination, diagnosis, treatment, prevention, and care of conditions and functions of the human foot by medical, surgical, and other scientific knowledge and methods" (Deane and McClung, 1977). In 1974, there were 8,261 podiatrists in the U.S., an average of 3.4 podiatrists per 100,000 population. However, the distribution of podiatrists is quite uneven so the competitive impact of the profession varies by state. Deane and McClung (1977) suggest that podiatrists compete most directly with orthopedic surgeons and general practitioners. They report that, in all states, podiatrists have the legal right to make, and act upon, an independent medical judgment. In addition, they may directly bill patients for services. Although all states require licensure of podiatrists, most states have reciprocity provisions. Deane and McClung conclude that state licensing laws do not represent a barrier to competition between podiatric practice and the medical profession. Organized medicine, on the other hand, has exerted in the past an anticompetitive influence in this market—most notably through restrictions on giving hospital admitting privileges to podiatrists. However, podiatrists have been successful in gaining limited hospital privileges (Lewin and Associates, 1981). Deane and McClung (1977) report that 49 percent of active podiatrists had hospital priviledges in 1975. In 1977, the American Medical Association endorsed the rights and privileges of podiatrists in hospitals. Although there appears to be ample evidence that podiatrists do compete with physicians over a limited range of services, evidence on price and nonprice competition, and its effects in this market, is lacking.

- *Chiropractors:* Chiropractics is recognized in all 50 states as a legitimate health profession, and laws defining the practice of chiropractics and licensure requirements have been passed in each state. Chiropractic, established in 1895, is based upon a theory that disorders within the body can be aided or cured by manipulation of the vertebra of the spinal column. The American Medical Association has consistently opposed the growth and expansion of the chiropractic profession. The AMA has opposed proposals to allow reimbursement of chiropractic services under Medicare and ethical provisions against physician-chiropractor cooperative arrangements have been defended on similar grounds. The argument generally used to support such restrictions is that such practitioners make no substantive contribution to the health of the public (P. Feldstein, 1977). Lack of data has made research on the nature and extent of price and nonprice competition between chiropractors and physicians difficult. Davis (1981) used Workmen's Compensation data to compare treatment costs for back and neck injuries treated by physicians and by chiropractors. He reports that, in the seven states studied, chiropractic treatment results in: (1) reduced treatment costs; (2) reduced time lost from work; and (3) reduced worker disability. However, no attempt was made to standardize the comparisons made nor to adjust for qualitative differences.

The market for nursing home services

In 1978, $15.8 billion was spent on nursing home care in the United States—representing 9.4 percent of all personal health care expenditures and 25.6 percent of expenditures by people 65 years of age and older (Fisher, 1980). Utilization of nursing home services has increased substantially over the past decade. The annual percentage growth rate for expenditures for nursing home services has been 19.6 percent which compares with the 12.5 percent growth rate for hospital expenditures (Scanlon, 1980).

Nursing home services are used primarily by the population over 65 years of age, a group which constituted 11 percent of the population but spent 29 percent of all health care dollars in 1978 (Fisher, 1980). As the U.S. population continues to age, the requirements for long-term care services, especially nursing home care, will also increase. Consequently, it is important to consider the current structure and performance of this market and the implications for future policies.

Market structure and barriers to competition: While much attention has been directed to policy issues and implications of nursing home services' provision, only a limited number of analytical studies have been conducted. The focus of the major research that has been conducted on this market has been on nursing home behavior under alternative reimbursement systems (Bishop, 1980; Morrissey, 1979; Skinner and Deane, 1978).

The descriptive and policy-oriented literature on the market for nursing home services focuses on several key characteristics which distinguished the nursing home market from most other markets within the health care sector (Blyskal, 1981; Jones, 1981; Feder and Scanlon, 1981; Shulman and Galanter, 1976). These characteristics include:

- While the majority of nursing home beds are operated by for-profit firms, a substantial segment of the market (30 percent of beds) is nonprofit.
- Nearly 50 percent of nursing home patients are receiving services under Medicare or Medicaid and, thus, have no out-of-pocket costs.
- The remaining 50 percent of patients are primarily private-pay and, with very little private insurance for nursing home care, pay the full cost of the service out of pocket.
- Consumers are generally able to obtain in advance, or by observing services provision, reasonably good information on quality and costs of care offered by nursing homes, and for private pay patients, consumers have incentives to search for such information.
- Medical services comprise only a portion of the total package of care purchased.

There are a large number of providers in this market and, consequently, consumers have available a variety of qualities and prices of services available—at least in most urban areas. While the trend toward chain-operated proprietary homes has been observed, the level of concentration in the industry is quite low. Blyskal (1981) states that the 10 largest U.S. nursing home chains account for only 10 percent of nursing home beds. Jones (1981) indicates that the 30 largest chains control only 12.2 percent of total nursing home beds.

In addition to competition among nursing homes for patients, nursing homes face external competition from home health agencies for the business of the less-disabled consumer. Reimbursement for home health care under public program provisions has stimulated rapid expansion of these agencies in recent years.

The fact that nursing home expenses are the largest single component of most state Medicaid budgets has lead to substantial government intervention in this market. The government controls entry into the market by requiring a state license in order to operate. In addition, to be eligible for reimbursement under Medicare and/or Medicaid, nursing homes must be certified by governmental authorities through a process separate from regular licensing procedures. Through inspection procedures, the government is also ultimately responsible for assuring maintenance of the facilities, through state and local building, fire, and other safety codes.

Under the current system, substantial incentives to expand capital facilities exist in the nursing home market. Shulman and Galanter (1976) indicate that nursing home investors receive multiple subsidies: (1) reimbursement formulas which include a return on investment; (2) no or reduced taxes on real estate investment; and (3) subsidies to construction of nonprofit nursing homes which include up to 100 percent financing. In addition, there are opportunities for leveraging in this market—speculators may sell and resell the same properties to obtain the depreciation benefits which are associated with these investments (Jones, 1981). As a result of these incentives, there are tendencies for nursing home owners to direct resources into bed expansion rather than into labor and food costs which would increase quality of care (Shulman and Galanter, 1976).

As nursing home costs have grown to become a greater and greater share of state Medicaid expenditures, many states have turned to control of bed supply as a means to constrain growth in Medicaid expenditures. Two factors are operating in this area: (1) constraining total bed supply puts upper limits on the total number of potential Medicaid beds available; and (2) the private-pay segment of the market is given first access to beds, with Medicaid-pay patients being given residual beds. Feder and Scanlon (1981) report that nursing home occupancy rates are uniformly high (89 percent or above) throughout the U.S. and they attribute this primarily to state efforts to control the nursing home bed supply. They observe that the consequence of these controls on bed supply is that Medicaid-eligible patients are faced with a shortage of nursing home beds, while private pay patients have reasonable access. The patient most affected is the Medicaid-eligible with greatest care needs. Nursing homes are able to chose among potential patients since nearly 70 percent have waiting lists (Jones, 1981), and thus have clear economic incentives to select higher revenue, private-pay patients *and* those patients with lowest care needs.

The primary means by which states control nursing home bed supply is through application of certificate-of-need regulations. The 1974 National Health Planning Act mandated that states, as a condition for Medicaid participation, enact a CON statute that includes nursing homes. While the nature and extent of implementation of CON regulations varies widely across states, Feder and Scanlon (1981) suggest that states may use CON to regulate bed supply and, at the same time, increase Medicaid reimbursement levels in order to reduce pressure on nursing home operators to reduce quality. Feder and Scanlon (1980) argue, however, that the combination of CON and higher reimbursement does not guarantee higher quality since CON grants some monopoly power to operators, who can reduce quality without fear of market repercussions. Patients will find it difficult to leave a nursing home with poor quality since a shortage of beds exists; the state will be reluctant to close a low quality nursing home since there is nowhere to transfer its residents.

In summary, there appears to be a substantial amount of competition in the market for nursing home services. At the same time, barriers to competition are present which affect the performance of a substantial portion of the market. Nearly half of nursing home patients pay for services out of pocket and face incentives to shop for the combination of quality and price of services that they prefer. Nursing home services are available from a relatively large number of providers (in urban areas) who compete for this private pay market. Concentration in the industry is low and, in addition, for some types of patients, home health agencies also offer competing services.

For the remaining share of the market, however, substantial barriers to competition exist. Medicaid-eligible patients have no financial incentives to search for the most cost-effective long-term care alternative since they face little or no out-of-pocket costs regardless of their choice. Each state has substantial market power through its ability to establish the price for nursing home services provided to Medicaid eligibles. At the same time, the state has the power to constrain the supply of nursing home services through application of certificate-of-need regulations. This latter market power may also affect the price that private pay patients face since the total supply of services available is constrained. As a consequence, chronic excess demand may be present in this market which permits nursing home operators to discriminate among patients.

Price competition: Most observers agree that, at least for the private-pay segment of the market, price competition exists and operates to ensure that the market is in equilibrium. Empirical evidence on this issue is very limited, however. Although several studies of the effect of Medicaid reimbursement levels on the market have been conducted (Deane and Skinner, 1978; Morrissey, 1979), few researchers have focused on the performance of the private-pay segment of the market. Scanlon (1980) develops and empirically tests a theory of the nursing home market which suggests that excess demand for nursing home services may exist over the long run in this market if states set Medicaid rates that are below market level or do not establish rules that keep the number of Medicaid eligibles low. He assumes that all private pay patients are able to pay the market price and, therefore, equilibrium is present in the private-pay market. The empirical results obtained by Scanlon support the hypothesis that excess demand in the market for nursing home services exists.

Price competition between nursing homes and alternative long-term care providers is also relatively unexplored. Most studies have focused on whether the utilization of alternative services results in lower governmental costs for provision of long term care services (Applied Management Sciences, 1976; Homemakers Upjohn, 1976; Weissert et al., 1979). Results of these studies, however, are mixed and there is no firm evidence on this issue, or on the issue of the nature and extent of price competition among alternative providers in this market.

Nonprice competition: It is generally understood that there are substantial qualitative differences among nursing homes and that, for both private-pay and public program consumers, nursing home quality is a factor taken into consideration when decisions are made. Empirical evidence on the interrelationships of quality and price was not found to be available in the literature surveyed. Weissert *et al.* (1979) compared "quality of life" differences between nursing homes and alternative long-term care providers. Results suggest that alternatives to nursing home care produce higher "quality of life" in terms of contentment and mental functioning of consumers.

The market for prescribed medicines

Total expenditures for drugs were $19.2 billion in 1980, which represented 8 percent of the total national health expenditures. Of this amount, approximately 57 percent was expended for prescription drugs. Private health insurance paid for 9 percent of drug expenditures in 1980 while government programs paid for 8.3 percent of total drug expenditures (Gibson and Waldo, 1981). In 1977, the most recent year for which detailed data on utilization of prescribed drugs are available, $5.5 billion was spent for prescribed medicines. Spending for retail drugs and sundries increased at an annual rate of approximately 9 percent from 1965 to 1980, a level significantly lower than other health services experienced. Consequently, the share of total national health expenditures accounted for by pharmaceuticals declined from 12 percent in 1965 to less than 8 percent in 1980.

Market structure and barriers to competition: The market for prescribed medicines is characterized by several distinguishing factors. The consumer of prescription drugs has little direct control over demand for these goods. Prescription drugs may be legally obtained only with a prescription from a physician. The consumer generally has inadequate information and knowledge to affect the choice of drugs and, having consulted the physician, must either purchase the prescribed drug or lose the benefit of the visit to the physician.

Other characteristics of this industry are relatively unique in the market for health services (Steele 1962):

- The patent laws protect new pharmaceuticals developed by research from competition from other producers for many years.
- Product differentiation by brand name is common as are large expenditures for advertising which is the basis of much competition in the industry.
- A high degree of concentration is apparent in the pharmaceuticals industry.
- Extensive government regulation of the new product development and dissemination processes exists.

The patent laws were created as a means to encourage invention in the U.S. Basic research is more likely to be conducted by the private sector if the organization financing the research can be assured that the benefits of research will accrue to it, at least for some period of time. Patent protection of new drugs has been critical to the development of this industry. Grabowski (1982) and Laubach (1980) argue, however, that recent federal regulatory actions affecting the pharmaceutical industry have slowed the rate of innovation and caused many firms to withdraw altogether from basic research and development. These regulatory activities include lengthy drug testing and approval times which have effectively reduced the average patent life from 17 years to 8.9 years (Grabowski, 1982). In addition, government policies of encouraging consumers to consider generic drug substitution, when appropriate, results in pharmaceutical firms obtaining lower returns on their research investments over the lifetime of the drug. Wiggins (1981) estimates the effect of government regulation on new drug introductions during the 1970s. Results indicate that regulation has reduced introduction rates by approximately 60 percent. One-fifth of this reduction is the consequence of reduced research spending.

Steele (1962) finds that there appears to be little evidence that it is necessary to have large-scale production in order to be competitive. Nonetheless, the market is labeled as at least moderately concentrated by several researchers (Green, 1972; Steele, 1962; Comanor, 1964). More than 400 of the 650 ethical drug firms in the United States in 1972 were relatively small and had sales primarily in the generic market. Of the largest-selling prescription drugs, 450 are sold exclusively under their brand name. The bulk of these (314) are the brand names of the 24 largest firms in the industry. These 24 firms were estimated, in 1970, to have 46 percent of the market (Green, 1972). Hornbrook (1978) examines the interrelationship between market domination and promotional intensity in the pharmaceutical industry. He hypothesizes that increasing market domination will be positively related to expenditures for promotional activities and to barriers to entry. The empirical results indicate that promotional intensity is negatively associated with market domination. The author suggests that promotion serves most effectively as a means of market penetration for small firms and thus, has a net procompetitive effect on the market.

Promotional direct sales to medical practitioners, who actually write the prescriptions for consumers, have been used by the dominant firms to create brand preferences for their products. For the 22 largest ethical drug firms, selling expenses were (in 1958) the second largest component of costs, averaging 24.8 percent of sales (Steele, 1962). On the other hand, the pharmaceutical industry has acted to restrict the advertising of drugs through state-level regulations. Pharmacists argue that advertising, although it may result in lower prices, will also result in lower service levels. However, one study indicates that such restrictions on advertising benefit pharmacists, only (Cady, 1976). Prescription drug prices are found to be significantly higher across all size classifications of pharmacies in states regulating prescription drug advertising, compared with nonregulating states. Cady (1976)) concludes that such regulations increase the welfare of pharmaceutical suppliers at he expense of consumers.

Price competition: The absence of price consciousness on the part of the physician, the inability of the patient to purchase any but the specified drug, and lack of consumer responsiveness to price changes are conducive to low levels of price competition in the market for pharmaceuticals. Few studies of price competition in this market have been conducted. Newhouse and Phelps (1974) examined the impact of insurance on prescription drug utilization and found that the decrease in out-of-pocket costs increased consumer use of drugs. However, empirical difficulties with this study make the findings ambiguous.

Generic drug substitution laws have been developed in many states to enable pharmacists, under some conditions, to substitute a lower-cost, equivalent drug for a drug prescribed by brand name. Studies of the effect of these laws indicate that consumers appear not to be very price conscious. Goldberg *et al.* (1977) found that less than 2 percent of brand name prescriptions were transformed to lower cost generic equivalents in two states where laws authorizing substitution were passed. A study of prescription drug prices in the state of Oklahoma, where an antisubstitution law exists making it unlawful for a druggist to use a generic equivalent drug if the prescription specifies the brand name version, resulted in an estimate of the welfare losses from such a law as being over $1.5 million (Green, 1972).

The available evidence suggests that there is little price competition in the pharmaceutical industry. The relatively small costs associated with infrequent prescription drug purchases cause consumers to be less likely to shop for lower prices. It is likely, however, that consumers with substantial continuing purchases of prescription drugs for a chronic condition would search for pharmacies with low prices. No evidence in the literature on this issue was identified.

Nonprice competition: Extensive product differentiation in this market, associated with substantial advertising of brand names, is the primary form of nonprice competition in this market. Given the relative price insensitivity of consumers of prescription drugs, brand name advertising appears to be the dominant form of competition in the market for pharmaceuticals. Competition between chain-operated and independent pharmacies is also a major source of nonprice competition in this market. As chains have acquired a greater share of the market, independent pharmacies have stressed the more personal service they offer customers, including delivery services, maintenance of patient profile records, and availability for emergency services. Chains, on the other hand, provide prescription services for a greater number of hours per week and, in addition, offer a variety of other services and goods (Cady, 1976). Product differentiation has become a substantial factor among sellers in this market.

A summary of policy issues

Proposals designed to increase competition in the market for health services

The evidence presented in the preceding chapters indicates that *some* market forces *are* operating within the market for health services and that, with appropriately designed incentives, additional competition may be introduced into the market. Policy debate on the nature of competitive forces and the type of additional competition that might most productively be encouraged could usefully focus on two questions.

- *To what extent will the introduction of greater competition to this market lead to correction of the current problems* ? There seems to be little doubt that there *is* a response by providers, insurers, and consumers to economic incentives. Introducing stronger incentives will create changes in the performance of the market. These changes alone will not be sufficient to remedy all the problems in this market due to specific instances of market failure.
- *If new incentives are created, what time span is necessary for the desired responses to be evidenced* ? Adoption of a competitive approach to improving the performance of the health care sector may necessitate a long time horizon. Consumers, providers, insurers, and employers will need time to become familiar with the new incentives and "learning" frequently is not instantaneous. If the prevailing viewpoint is that the escalation in prices and expenditures in this industry is an acute problem, then adoption of a long term solution, alone, may not be appropriate.

A variety of alternatives have been proposed which are designed to improve the performance of the health care market by increasing the strength of selected competitive forces. These proposals focus on one or more key concepts:

- Increasing consumer choices;
- Increasing consumer cost-sharing;
- Changing the tax treatment of insurance and medical care;
- Controling the terms of employment-based insurance; and
- Application of antitrust law.

These proposed changes in the market would create incentives for market participants to behave in ways that more closely approximate the conduct of participants in a properly functioning economic market. A summary of major competitive plans which have been proposed, both private and legislative, is contained in Tables 3 and 4 of the *Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services*, along with a brief description of the key features of each. In this chapter, the nature and intent of each type of competition concept is discussed. Then, a summary of selected policy issues and the evidence on each is presented.

Increasing consumer choices: Consumer choices in the market for health services are constrained in several ways.

- Consumers directly choose only a limited amount of the health services they use. Due to legal and institutional barriers to free choices, consumers must delegate a substantial decisionmaking power to physicians.
- Employment-based insurance plans offer consumers only an extremely limited set of insurance options.

Legal, technological, and institutional barriers to consumer choices. Medical care is a complex and highly technological product. As a result, few consumers are sufficiently knowledgeable to permit them to make informed decisions about health services. In addition, there exist legal and institutional barriers that prevent consumers from directly acquiring some types of health services (e.g., prescription drugs, dental hygienist services, hospital care). As a result, physicians control a substantial portion of the decisionmaking in the market for health services. How physicians use this power affects the performance of the market for health services.

Physicians may act in the patient's interest (i.e., as an agent for the consumer) in this role, giving no weight to considerations of the impact of these decisions on physician incomes. If so, in the absence of insurance, this delegation of decisionmaking power would have little effect on the functioning of the market, since the physician serves as a neutral advisor and takes into account the patient's ability to pay for services. With substantial insurance coverage present, however, the physician will act in the patient's interest by offering the patient more costly services as long as their marginal benefit exceeds the patient's net cost, which may be zero. Ideally, the physician also evaluates the noneconomic costs of treatment as well. In addition, patients may expect and request this level of care when substantial insurance is present. The physician may be under pressure to prescribe this level of care even when aware of alternative, less costly modes of treatment or diagnosis.

If physicians do not act as perfect agents for the patient, they may take into account their own economic self-interests in making decisions for the patient. In this case, it is possible that *supplier-induced demand* exists in the market for health services and that this results in patients receiving more services than are beneficial to them and/or to society.

Solutions to remedy the lack of adequate information in the market for health services have been proposed which affect both the consumer and the provider of health services. Providing means for consumers to become more informed on a number of issues is one alternative. Development of local physician directories which would provide information on fees charged by individual physicians would assist consumers to be price-conscious in their selection of physicians. Increasing the extent of consumer cost-sharing (discussed in more detail below) would create incentives for consumers to try to become better informed on the aspects of medical care they can control. Offering second surgical opinion programs provide consumers with an avenue for obtaining information on the decisions that physicians are making on their behalf.

Policy options which impose controls on physicians or which would create more appropriate incentives for physicians also have been proposed. Utilization review programs, retrospective or concurrent, are mechanisms which impose constraints on physicians' abilities to act in their own, rather than the patient's, best interests. Expansion of alternative delivery systems which pay physicians on bases other than fee-for-service may create a competitive environment which constrains the physician from setting excessively high prices and from recommending "unnecessary" services.

Employment-based group insurance. The overwhelming majority of health insurance in the United States is purchased through employers. This fact has two implications for the functioning of the market for health services:

1. The buyers of group insurance policies may be better informed and more conscious of differences in premiums and benefits offered than are purchasers of individual policies.

2. Employees are offered only a limited set of options with respect to health insurance coverage.

The presence of employment-based group insurance in this market may cause the market for health insurance to perform more efficiently: sellers of group insurance must minimize costs in order to offer premiums that are low enough to be competitive. That employees' choices are restricted, on the other hand, may be a partial cause of overinsurance in this market and, consequently, of poor performance in the market for health services.

The advantages of establishing a system for increasing consumer choices of the type and extent of health insurance coverage are:

- Consumers would be able to select the type of insurance that most closely matches their preferences and needs, based upon individual assessment of health status and financial risk; there might be less tendency for overinsurance among consumers, since it would not be necessary for all employees to have comprehensive insurance in order to ensure that high-risk and financially vulnerable employees were appropriately covered.

- Offering an HMO option, as well as traditional insurance, to employees creates a system where HMOs can compete for market share on equal terms with the fee-for-service delivery system; increasing the market share of HMOs may cause fee-for-service providers to become more price conscious and restrained in their behavior.

Increasing the number of alternatives that employees have available from which to choose has been a central tenet of many of the policy proposals developed. Currently, many health maintenance organizations (HMOs) require that employers offer at least one other health insurance option. But based on the most recent data available, there is generally little opportunity for individual choice: only 18 percent, or

11 million, of the subscribers in employment-related group plans were offered an option in 1977.

Increasing consumer cost-sharing: Another concept which has received much attention, and is included in several competitive proposals, is to increase the price sensitivity of consumers by offering health insurance policies with substantial cost-sharing provisions. Currently, the health insurance coverage of many people is relatively shallow: low-cost/frequent-occurrence events are insured against, rather than just high-cost/infrequent-occurrence events. This causes consumers to utilize low-cost/frequent-occurrence covered services excessively, while they remain at financial risk should a catastrophic illness occur.

Insurance which covers events which occur rarely, and are very expensive, would create fewer incentives to use medical services beyond the point where the benefits are less than the full costs of the services. Routine sevices and common medical events, over which the consumer has substantial control, would not be insured under several of the competition proposals with cost-sharing aspects. As out-of-pocket costs increase, some consumers would become more price conscious and would use services more cautiously. In addition, strengthened price consciousness could also cause some consumers to search for providers who offer equivalent services at lower prices. A beneficial secondary effect of increased consumer cost-sharing might be the decreased ability of physicians to "induce" demand for services. At least some consumers might be expected to become better informed and to exercise judgment in considering the courses of treatment recommended by physicians. However, full implementation of this approach will require that consumers be prohibited from purchasing supplemental insurance policies in order to reduce out-of-pocket costs.

Changing the tax treatment of insurance: There is a substantial tax subsidy to the market for health services which is, in part, responsible for the existence of both overinsurance and excessive utilization of health services. The sources of these tax subsidies are:

- exclusion of the value of employer-provided health insurance from employee taxable income;
- income tax deductions for health insurance premiums paid out of pocket by the taxpayer; and
- income tax deductions for expenditures for health care which are greater than an income-related minimum and paid out of pocket by the taxpayer.

The subsidization of health insurance through the income tax mechanism creates incentives for employees to prefer more health insurance coverage to an equal dollar amount of increased wages. As a result, employment-based insurance benefits are increased and copayments are less than they would be in the absence of the tax subsidy. A similar result occurs with tax subsidization of out-of-pocket medical care expenses: consumers purchase a greater amount because the tax subsidy reduces the out-of-pocket price of medical care to the consumer.

A major reason for providing tax subsidies for health insurance and medical care is that there has been a general consensus within society that access to basic health services should be available to everyone, regardless of ability to pay. The tax subsidy encourages the purchase of insurance which reduces the financial barriers to health care; tax deductions for out-of-pocket health care costs act as a partial national health insurance plan for those individuals who suffer from financially catastrophic illness.

Despite the rationale for tax subsidies, most economists and many policymakers believe that the presence of these subsidies is one of the fundamental causes of the major problems existing in the health care sector. Consequently, nearly all of the proposals directed toward increasing competition in the health care market include limitations of tax subsidies or recommend abolishing the tax subsidy completely and replacing it with some type of direct subsidy to individuals.

Controlling the terms of employment-based insurance: In the past, employment-based group insurance was provided as a single-choice option which the employee could accept or reject. The employer generally paid part or all of the cost of the premium for the employee.

In the past, when more than one insurance plan has been offered, it was common practice that the amount that the employee paid out of pocket was fixed, with the employer paying the balance. Since many employers pay all, or a substantial portion of the premium, the employee seldom has to pay a large financial share of alternative plan premiums, even when varying premium levels are associated with different plans. Within this system, the employee generally has little financial incentive to choose among plans. Instead, benefits offered, convenience of the coverage, or other noneconomic factors may be the basis for the decision. In general, the employee would be expected to choose the most generous insurance coverage available, given that the out-of-pocket premium was fixed, nonexistent, or relatively small.

The structure of employment-based group health insurance has been criticized as a cause of:

- *Overinsurance;*
- *Excessive use* of covered services; and

- *Lack of price competition* in the market for health services.

Consequently, many of the competition proposals include provisions which restructure the terms of employment-based group insurance. The suggested reforms include:

1. Employers should offer multiple health insurance options which include traditional insurance and HMO(s),[1] as well as a low-option plan and a comprehensive plan.
2. Employers should contribute a fixed amount toward any employee's health insurance, not to exceed the full cost of the lowest option plan, unless the employee choosing that option can receive a refund of the difference between the cost of the plan selected and the amount the employer is contributing.
3. The federal government should permit the exclusion from taxable income of some portion of the refund the employee receives from choosing a low-option plan.
4. A ceiling should be imposed on the amount of employer contribution toward health insurance which can be excluded from employees' taxable income.

These changes in the terms of employment-based group insurance are directed toward increasing the employees' incentives to select insurance coverage on the basis of its perceived value to the individual. With these changes in the system, economic incentives would be created for some employees to choose insurance coverage that is less than fully comprehensive and more in accord with the employee's preferences in the absence of employment-based group insurance. However, many economists and policymakers suggest that adverse selection (discussed later in this chapter) may result when choices become available to consumers and may create difficulties in maintaining the system.

Antitrust applications: It has been suggested by some observers that a major obstacle to increasing the extent of competition in the market for health services is organized medicine's excessive influence over the mechanisms for financing and delivering health services. In this view, physicians (especially) act collectively to eliminate any threats to their economic well-being. Thus, physicians may boycott insurers that institute cost containment programs, deny hospital staff privileges to physicians who are employed by HMOs, and take other actions which will control activities which are contrary to the interests of the medical profession.

Prior to the 1975 *Goldfarb vs. Virginia State Bar* decision by the U.S. Supreme Court, physicians and other "learned professions" were exempt from application of antitrust laws, for most actions. The 1975 decision established that the professions must obey the Sherman Act's prohibition against actions directed toward restraint of trade. Consequently, the medical profession may now be prosecuted under antitrust laws. However, proponents of stronger enforcement of the antitrust laws in the market for health services believe that, to date, physicians continue to enjoy some immunities to antitrust provisions.

Conclusion: There is widespread concern that the market for health services is insufficiently competitive and that the lack of competition in this market is the result of prevailing incentives, including existing government tax policies, which lead to overinsurance, excessive utilization of health services, and rapid inflation. Numerous policy analysts and policy makers, familiar with the structure and the characteristics of this market, have proposed that substantial changes are needed to remedy the distortions which currently influence performance in this market. A brief overview of key concepts of the most frequently discussed proposals designed to increase competition in the market for health services has been presented in this section. It should be noted that, although there is no unambigious evidence that these proposed changes would necessarily lead to a decrease in overinsurance, utilization, and/or inflation, the expected results of adopting these policies depends upon the nature of market forces in the health care system and the appropriate role they may play in restraining cost increases and improving the availability and cost of care.

The previous chapters of this report have reviewed evidence on barriers to competition, price competition, and nonprice competition, in each of the submarkets which, together, comprise the market for health services. The following section of this chapter contains a summary of the evidence on selected policy issues which are related to the proposals which have been developed as means for increasing competition in the market for health services.[2]

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[1] The 1973 Health Maintenance Organization Act (P.L. 93-22) contains provisions which does change these terms: employers with 25 or more employees must offer a federally qualified HMO option to employees if they offer traditional insurance, if an HMO is available.

[2] This summary draws upon the extensive literature which has been reviewed in Chapters 2 through 7; thus, no specific citations or references are provided in this chapter.

A summary of the evidence on selected policy issues

In order to choose among the various alternative approaches to restructuring incentives and increasing competition in the market for health services, it is essential to have available as much information as can be obtained on the extent to which each proposal can be expected to impact on the market, as well as on the time frame necessary to effect the desired changes. Unfortunately, there are many issues of interest in this area which, to date, have been investigated only superficially, if at all. Consequently, evidence that relates to policy issues associated with specific competition proposals is not always available. For other issues, however, considerable research has been conducted and tentative conclusions with respect to the policy may be formed.

In this section, a number of important policy issues have been selected for consideration, including:

- *Financing* issues, including cost sharing, premium rating, and reimbursement methods;
- *Professional practice restraints;*
- *Consumer choice* issues, including information, advertising, induced demand, and adverse selection;
- *Tax subsidy* issues;
- Issues related to *nonprofit institutions ;*
- Alternative delivery systems issues; and
- Issues related to *regulation* of the market for health services.

Although there has been considerable research conducted on each of these issues, with sometimes conflicting and ambiguous findings, in the following sections conclusions are presented based upon the preponderance of the evidence. Thus, it is likely that there is some contrary evidence available for most of the conclusions drawn; however, the majority of research findings and/or the results of the best-formulated studies support these conclusions.

Financing issues: A substantial proportion of all health care in the United States is paid for by third parties, rather than out-of-pocket by the consumer. While insurance and government programs have provided improved access to care for much of the population, the presence of third-party payment for services has been blamed for many of the ills of the health care market. Major policy issues related to how health care is financed are: (1) cost-sharing provisions; (2) premium rating; and (3) reimbursement methods. The evidence on each varies, although some research has been conducted on each issue and its impact on the market for health services.

- *Cost-sharing provisions:* Most insurance policies include provisions requiring policy holders to pay an initial deductible amount (e.g., $100) and some share of the costs of services used. These amounts tend to be relatively small for service benefits policies and larger for the less common indemnity benefits contracts. The important question for any cost-sharing mechanisms proposed to strengthen price consciousness of consumers is: *How much and what type of utilization would decline if the consumer were required to pay a larger share of the costs of care?* A large number of studies have examined the issue of consumer utilization responses to changes in the price of services. *Results of these studies indicate that consumers do reduce utilization of services when the out-of-pocket price increases.* The group with the greatest response to increased cost-sharing is the poor and the services which appear to be most affected are those for preventive care.
- *Premium rating methods:* Two types of methods are used to establish premiums for health insurance policies. *Community rating* of premiums is based upon the average benefit costs expected to be incurred for the average person covered by the carrier in the community within which the policy is written. *Experience rating* of premiums is based upon the expected benefit costs for the individual policy holder or for the specific group covered by the policy. Community rating spreads the risk over a larger number of people and, thus, high-risk (or high-utilization) individuals or groups are subsidized by individuals and groups which use fewer or less costly services. *It has been shown that community rating imposes heavier costs upon blacks and the poor, while benefiting whites and higher-income individuals.* Experience rating permits insurers to charge a premium which is related to the utilization experience of the policyholder. *Therefore, experience rating may provide incentives to foster utilization control and price consciousness.* However, experience rating may make it impossible for high-risk individuals and small groups to purchase insurance if the premium cost is great relative to their incomes. The consequence of this may be that some high-risk individuals are unable to obtain medical care or that more high-risk persons become public charges for medical services.
- *Reimbursement methods:* Insurance providing service benefits reimburses hospitals on a charge basis or on a cost-plus basis. *Both these methods eliminate cost-constraining incentives for hospitals* which lead to higher quality and more rapid technological

change than may be optimal. Indemnity benefits for hospital and physician services specify a fixed payment for each type of service provided. *Indemnity payments are associated with higher consumer cost-sharing and create incentives for consumers to search for providers with lower prices.* Studies have found that insurance offering indemnity benefits has declined, relative to service benefits plans, which suggests that consumers prefer service benefits coverage.

Professional practice restraints: Organized medicine and other provider groups have the potential to exert substantial influence over the market for health services. While some actions of organized provider groups are focused on assuring that a minimum standard of quality of care is maintained, other actions may be directed toward the economic self-interest of the profession. The three areas of provider influence of greatest relevance to policy are:

- Professional association actions;
- State medical practice acts; and
- Professional influence within the insuring organization.

The evidence on the extent and impact of provider influence on the market for health services is substantial. The intent and implications, however, are sometimes ambiguous.

- *Professional association actions:* In the past, it has been evident that organized groups of providers have joined together to oppose particular policies or actions of other groups which have threatened the profession's ability to dominate the methods of delivering and financing of services. *Boycotting insurers, refusing to deal with competing organizations, prohibiting providers who engage in certain competitive actions from practicing in the profession—all are among the anticompetitive practices with which provider groups have been charged.* Evidence has been found that indicates that the growth of HMOs has been impeded by anticompetitive actions of organized physicians. The magnitude of these impacts on the market has not been fully addressed.
- *State medical practice acts:* The purpose of most medical practice act provisions is to set minimum standards for the quality of care available. Thus, these acts specify licensure standards for physicians and hospitals, as well as other professional groups, and establish appropriate standards of conduct and responsibility for each profession. *Medical practice acts prohibit nonphysician professionals from practicing without the direction of a physician, even when appropriate and cost-effective. These acts prohibit a physician from providing services under the management of a nonphysician, creating barriers to the development of nonphysician-owned HMOs.* Various other provisions of medical practice acts have similar anticompetitive effects. In most states, medical practice acts have been developed with major input from the state, county, and local medical societies. As a result, they may contain provisions which are favorable to the interests of these groups. *Federal laws superseding anticompetitive provisions of state medical practice acts and/or application of antitrust laws have overcome some of the anticompetitive aspects of these laws* (e.g., those which apply to development of HMOs).
- *Professional control of insuring organizations:* Hospital and physician organizations were responsible for the development of Blue Cross and Blue Shield insurance programs. These organizations are nonprofit and, in general, appear to foster an ideological preference for comprehensive service benefits coverage which would ensure that consumer out-of-pocket cost is small and that providers will be paid fully for services provided. A substantial number of the plans are dominated by provider groups. *For Blue Shield plans, there is some evidence that physician control of the board of directors may be associated with higher average fees paid, when the physician board members are selected or appointed by the local medical society.*

Consumer choice issues: A number of constraints on freedom for consumer choice and related issues associated with consumer choices exist. These include: (1) limited choices; (2) inadequate information; (3) advertising restrictions; (4) supplier-induced demand for services; and (5) adverse selection in insurance. Each is an important element in the potential for developing a competitive market for health sevices.

- *Consumer choice:* Consumers frequently have been limited in the choices of insurance coverage which are available through employment-based group insurance. *When choices are made available, some consumers do appear to choose the type of insurance and coverage on the basis of a rational assessment of individual needs.* In addition, as consumers gain more familiarity with the alternatives available, they tend to shift among policies to refine their choices.
- *Consumer information:* Because much medical care is complex and highly technological in nature, consumers may be unable to determine adequately the appropriate medical treatments. When inappropriate treatment is offered, consumers may be unable to reject this treatment on the basis of their own information. However, pro-

grams to aid consumers in assessing medical services may be successful in improving the ability of consumers to make appropriate choices. For example, *second surgical opinion programs have found that a substantial proportion of recommended elective surgical procedures are not recommended by a disinterested physician reviewing the case. Of patients who received second opinions that surgery is not necessary, a majority chose not to have surgery.*

- Advertising: Most advertising has been prohibited in the market for health services. This prohibition has been the result of organized medicine's view that advertising of services and prices constitutes unethical behavior. Recent court rulings, however, have substantially lifted these prohibitions on advertising. *There is evidence that advertising can have a beneficial effect on prices of services:* specifically, it has been found that eyeglasses are less expensive in areas where advertising is permitted. However, some advertising may be market-expanding (e.g., weight-loss clinics, plastic surgery) and, consequently, the lifting of prohibition on advertising may create greater demand for services and higher total expenditures for health care.
- *Supplier-induced demand:* It has been argued that physicians have the ability to affect the demand for their own services due to inadequate consumer information and the presence of third-party payment for services. *Numerous studies have been done which attempt to determine whether supplier-induced demand exists and, if so, how great an effect it exerts on the markets. The results of these studies are ambiguous:* it is uncertain whether supplier-induced demand exists and, if it does, it is unclear whether it is a major problem or only a rare and limited occurrence.
- *Adverse selection:* Insurers have less information about the potential financial risk associated with individual insureds than does the individual. As a result, when consumers are permitted to choose at periodic intervals among multiple options, they may choose an option that provides a benefit they expect to use. The premium, however, is based upon a random occurrence of conditions, and the insurance company may suffer substantial financial losses due to this consumer self-selection. *There is some evidence in the literature that indicates that adverse selection can exist when multiple-choice insurance options and periodic open enrollments are available.* It should also be recognized that insurers may engage in "preferred risk selection" (i.e., refusing to insure those groups and individuals with high risks of incurring substantial health expenses) when community rating of premiums is required or when there are inadequate data to permit a realistic experience-rated premium to be set. Evidence on the extent of this problem is lacking.

Tax subsidy issues: Tax subsidies to health insurance and medical care purchases have been charged as responsible for the existence of both overinsurance and excessive utilization of health services. Most proposals designed to stimulate competition in the market for health services include some changes in the way tax subsidies are provided. Some recommend abolishing tax subsidies entirely.

- Numerous studies have examined the incidence of tax subsidies to health insurance and medical care services. All find that *the tax subsidy creates incentives to purchase more insurance* than would be the case without tax subsidization. It also is agreed that the nature of the tax subsidy is such that *individuals in higher income brackets receive a greater subsidy than do lower-income persons.*

Nonprofit institutions: A substantial portion of health services are provided through nonprofit organizations. The consequence of this is that these providers are not behaving in accord with the "profit motive." As a result, price competition in the health services market is reduced.

- *Hospitals:* Only about 10 percent of short-term hospitals in the U.S. are for-profit organizations. There is substantial evidence that hospitals are not engaged in price competition, for the most part. *Competition in this industry is more often focused on services available, new technology, and acquiring staff physicians.* Some evidence exists that for-profit hospitals are more efficient than nonprofit hospitals. There is also, however, evidence that for-profit hospitals attract a different patient mix which may explain these apparent efficiencies.
- *Insurers:* Nonprofit insurers tend to be dominated by provider groups. *The present research shows that Blue Cross and Blue Shield plans choose to use cost advantages associated with their nonprofit status to provide more comprehensive benefits.* Although it has been hypothesized that Blue Cross and Blue Shield plans are less efficient and have higher administrative costs than commercial insurers, the existing evidence provides little support for this view.

Alternative health care delivery systems: HMOs constitute only about 4 percent of all insurance purchased in the United States. This form of insurance and alternative delivery system, however, has received substantial attention from researchers and policymakers. Although firm evidence is not yet available on all policy issues associated with HMOs, much is known.

- *Costs and utilization:* HMOs appear to be a less costly mechanism for providing health services. *Total expenditures for medical services, in-plan and out-of-pocket, usually are lower for HMO enrollees than for persons covered by traditional insurance plans.* Lower hospital utilization appears to be the primary means through which savings are achieved. *IPAs, which have services provided by participating fee-for-service physicians, do not achieve the substantially lower costs which result from HMOs where physicians are paid on a salary or capitation basis.* The extent to which lower costs for HMO enrollees reflect financial and organizational incentives to change behavior or reflect self-selection by physicians or enrollees is undetermined.

- *Competitive responses:* The competitive impact of HMOs on the traditional insurance/fee-for-service system has been studied only by a limited number of researchers. *There is only tentative evidence that the presence of HMOs may encourage the fee-for-service delivery system to constrain utilization rates and costs.* The HMO market share necessary to induce a competitive response from traditional insurance/fee-for-service providers has not been determined. However, it is possible that such an HMO market share necessary may be relatively small.

Regulatory issues: The market for health services is an extensively regulated one. Many existing regulations have been adopted in the hope of achieving greater control over rapidly rising expenditures by creating more provider awareness of costs. The evidence on two programs is reviewed here: (1) CON; and (2) utilization review.

- *Certificate-of-need:* Studies of the effectiveness of certificate-of-need programs in restraining over-investment in capital by hospitals have found that, in the short run, *CON programs may affect growth in bed supply but appear to lead to shifts in the mix of capital, rather than to reduced investment, overall.* There may be a more desired long-run impact of CON, but the programs have not existed long enough to enable researchers to examine this. *One side effect of CON programs is that they may have a negative effect on the expansion of HMOs in some areas, by creating a barrier to entry.* However, recent federal legislation requires that states exempt HMOs from CON in the future.

- *Utilization review/professional standards review organizations:* Utilization review programs were initiated to: (1) constrain rising costs of care by reviewing appropriateness of services; and (2) assure that quality of care met an accepted minimum standard. *Most studies of retrospective utilization review have found no cost-constraining impact.* Prospective and/or concurrent review may have been associated with some reductions in costs and utilization. One possible effect of utilization review is that the presence of a program may reduce the market power of the physician to create demand for services. No evidence on this point has been accumulated, to date.

Summary

There are numerous proposals designed to increase competition in the market for health services. Much research has been conducted on various aspects of these proposals. Relatively good information on the potential effectiveness of some proposed policies is available. However, less is known about the probable magnitude of the response and the time frame necessary to achieve these objectives. The current evidence on the policy issues reviewed here may be used to guide formulation of specific approaches to increasing the impact of competitive forces on the market for health services and achieving, through these policies, greater control over future cost increases in this market.

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This report provides a comprehensive synthesis of the existing research on the nature and extent of competition in the financing and delivery of health services. The emphasis in this report is on presenting evidence on barriers to competition, price competition, and nonprice competition in the health services market. The initial chapter focuses on developing a definition of competition which can provide a framework for the organization of the synthesis of the literature. Then, structure, conduct, and performance in the market for health services is reviewed, with an emphasis on those factors which act as barriers to competition and affect the performance of the market. Separate chapters are devoted to examination of competition and its effects in the markets for hospital services, physicians, dentists, health insurance plans and alternative delivery systems. Evidence on competition in several other submarkets is concisely summarized in an additional chapter. The final chapter focuses on findings related to current policy issues.

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